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ABSTRACT

This secondary level vocational administrator's manual is designed to increase awareness of cost-effectiveness analysis concepts, provide step-by-step procedures and analytical techniques for conducting a cost-effectiveness analysis study, and assist administrators in improving management skills by using appropriate information from the study in their decision making for program evaluation, development, and planning. An introductory section includes a summary of the cost-effectiveness analysis model developed by the authors (and published as a separate technical report). The activities outlined for administrators include (1) determining the purpose of the analysis, (2) identifying appropriate resources, (3) developing a study plan, (4) collecting required data, (5) computing cost-effectiveness measures, (6) interpreting the measures, and (7) utilizing the results. Included also are analytical forms and instruments coordinated with the instructional/outlines for each activity. (Author/HD)

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Administrator's Manual

COST-EFFECTIVENESS ANALYSES OF SECONDARY VOCATIONAL PROGRAMS

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ABSTRACT

Purposes. The project's purpose was to develop an administrator's manual for guiding locally directed cost-effectiveness analyses of secondary vocational education programs. The manual increases awareness of the cost-effectiveness analysis concepts, provides step-by-step procedures and analytical techniques for conducting a cost-effectiveness analysis study, and assists administrators in improving management skills by using appropriate information from the study in their decision making.

Procedures. Based upon the cost-effectiveness system developed by the authors, the manual orients the user toward the system. The outline of the manual was reviewed by the Project Advisory Committee and National Advisory Panel members as well as vocational administrators. Their comments were incorporated into all phases of the procedures and materials.

Products. The manual provided orientation toward the use of the cost-effectiveness system. It includes a summary of the cost-effectiveness analysis model. Seven activities within three phases were developed. These activities include (1) determining the purpose of the analysis, (2) identifying appropriate resources, (3) developing a study plan, (4) collecting required data, (5) computing cost-effectiveness measures, (6) interpreting the measures, and (7) utilizing the results. Analytical forms and instruments are coordinated with the instructional outlines for each activity. These materials are included in the manual.

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Special indebtedness is expressed to vocational directors, Mr. Thomas Garrison, Mr. Roderick McKinney, and Mr. Don Pennington, who provided us with useful information from their corporations. Thanks to Mr. Larry Manly and Mr. William Cook, for their assistance in reviewing cost analysis information.

We hope this manual will be helpful for local administrators to conduct locally directed cost-effectiveness analyses of their vocational programs. After using the manual, we would appreciate receiving any comments and suggestions for improvement.

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CHAPTER I

Introduction

A. *What are the objectives of the manual?*

B. *How was the manual developed?*

C. *How is the manual organized?*

A. *What are the objectives of the manual?*

- Background of the Manual

This report presents an administrator's manual for locally conducting cost-effectiveness analyses of secondary vocational programs.

The manual was developed at Indiana University-Bloomington with the support of the Indiana State Board of Vocational and Technical Education.

- Objectives of the Manual

The manual was basically designed as a self-instructional guide to conducting locally directed cost-effectiveness studies for vocational program evaluation and planning. The objectives are:

1. To increase awareness of cost-effectiveness analysis concepts.
2. To provide step-by-step procedures and analytical techniques for a cost-effectiveness study.
3. To assist administrators in improving management skills by using appropriate information from the study in the decision-making process.

B. How was the manual developed?

- **Procedures Used to Develop the Manual**

Based upon the cost-effectiveness analysis model, the manual was developed through the following procedures:

1. **The manual was outlined to include orientation toward the use of the model and procedures for using the cost-effectiveness model.**
2. **The project advisory committee reviewed and made comments on the manual in the development process.**
3. **The national advisory panel was consulted for review and comments on the outline of the administrator's manual in relation to the cost-effectiveness analysis model.**
4. **The manual developed step-by-step procedures, specific activities and analytical forms for the planning, implementing, and utilizing phases.**

C. *How is the manual organized?*

- Organization of the Manual

The manual is organized into four chapters. The remaining parts of the manual present (1) orientation toward using the cost-effectiveness analysis model, (2) step-by-step procedures and forms, and (3) concluding remarks for using the manual.

1. Chapter II draws attention toward awareness of the cost-effectiveness concept and analytical procedures. The chapter includes:

   (1) Definition of a cost-effectiveness analysis,

   (2) Needs for cost-effectiveness analysis of vocational programs,

   (3) An outline of the cost-effectiveness analysis model, and

   (4) Procedures for using the model.

2. Chapter III describes step-by-step procedures and analytical forms by:

   (1) Planning phase,

   (2) Implementing phase, and

   (3) Utilizing phase.

3. Chapter IV states concluding remarks and suggestions for using the manual. Supporting documents follow as appendices.

CHAPTER II

Orientation to the Cost-Effectiveness Model

A. *What is a cost-effectiveness analysis?*

B. *Why is a cost-effectiveness analysis needed for vocational programs?*

C. *What is the cost-effectiveness analysis model for secondary vocational programs?*

D. *What is the procedure for a cost-effectiveness analysis?*

A. *What is a cost-effectiveness analysis?*

- **Definition**

A cost-effectiveness analysis is an analytical tool for assessing outcomes of operating and/or alternative programs in achieving specified objectives in relation to costs.

- **Cost-Effectiveness and Cost-Benefit Analysis**

Cost-effectiveness analysis is distinguished from cost-benefit analysis by concentrating on the measure of program effectiveness as the degree of goal attainment, which cannot be priced. In cost-benefit analysis, benefits are expressed in the same monetary units as costs.

- **Cost-Effectiveness Analysis and PPBS**

As an analytical technique, cost-effectiveness analysis is related to Planning, Programming, Budgeting System (PPBS). It increases the potential of the PPB System by providing decision-makers with appropriate information on program effectiveness and cost implications in achieving the stated objectives.

B. *Why is a cost-effectiveness analysis needed for vocational programs?*

- Resource Allocation and Utilization

  As a decision model for an optimal allocation or utilization of resources, a cost-effectiveness analysis may be used to provide decision-makers with a useful criterion in allocating or utilizing a given amount of resources to the most worthy of vocational programs.

- Program Evaluation and Planning

  A cost-effectiveness analysis is needed for the evaluation of existing programs in terms of program effectiveness as compared with associated costs. Also, the analysis can be used in developing new alternative programs as well as program planning in order to maximize the effectiveness with a given amount of resources for the program, or to produce the same level of effectiveness at the lowest possible cost.

- Demand and Support for Vocational Education

  Increase in demand and support for vocational programs needs systematic analyses of the program effectiveness and costs. Appropriate information from cost-effectiveness analyses provides rationale for supporting vocational programs.

C. *What is the cost-effectiveness analysis model for secondary vocational programs?*

- **The cost-effectiveness analysis model**

A conceptual model is a simplified representation of relationships among the components involved in analyzing cost-effectiveness of secondary vocational programs. The model includes four major components, three measures, and three additional factors (See Figure 1, p. 13).

1. Vocational programs:

The secondary vocational program is distinguished from its counterparts, the general or academic program at the secondary school. It includes seven program areas:

(1) Agriculture
(2) Distributive education
(3) Health occupations
(4) Home economics-occupational
(5) Business and office
(6) Technical education
(7) Trade and industry

The sub-program areas or courses, such as agriculture production or horticulture within the agriculture program area, are called vocational instructional programs as units for analyses. The classification of the vocational education programs is based upon the classification scheme developed by the U.S. Office of Education (See Appendix A).

2. Program objectives:

Program objectives are desired outcomes or target goals anticipated from an instructional program. The objectives of secondary vocational programs are classified into seven categories:

(1) Completion of students from vocational programs
(2) Completion of special student groups from vocational programs
(3) Provision of occupational preparation
(4) Student leadership development
(5) Provision of guidance and counseling services (career development)
(6) Fulfillment of labor market requirements and community manpower needs
(7) Advanced education of graduates from secondary vocational programs

Each of the program objectives is specified in measurable terms as a target goal (See Appendix B).

3. Program outputs:

Program outputs are actual outcomes from a vocational program. Output indicators are made in accordance with predetermined target goals.

4. Program costs:

Program costs are annual expenses for operating vocational programs at the local school corporation (district) level. Annual expenses include direct and indirect costs.

Direct costs. Costs that are directly related to the instruction of a vocational program. Direct costs include six categories:

(1) Salaries of teaching staff
(2) Fringe benefits of teaching staff
(3) Travel costs for instruction
(4) Costs of supplies and materials for instruction
(5) Costs of classroom and laboratory facilities and equipment
(6) Building use cost

Indirect costs. Costs for supportive services necessary in the operation of vocational programs which can be prorated to a vocational program. Supporting services costs include:

(1) Prorated student services costs
(2) Prorated instructional staff services costs
(3) Prorated general administration services costs
(4) Prorated school administration services costs
(5) Prorated business services costs
(6) Prorated central services costs

Total costs. The total program cost is direct cost plus prorated indirect cost for a vocational program.

5. Program effectiveness:

Effectiveness is a measure of goal attainments for a program, that is, the extent to which specified target goals are achieved.

$$\underline{\text{Effectiveness score(s)}} = \frac{\text{Output(s)}}{\text{Target goal(s)}}$$

Effectiveness index. A composite or average effectiveness and/or weighted composite or weighted average effectiveness.

6. Cost efficiency:

Efficiency is measured by the unit cost.

$$\underline{\text{Unit cost}} = \frac{\text{Total cost of program}}{\text{Unit of output(s)}}$$

Unit of output(s): number of completions, or enrolled students, or student contact hours.

$$\underline{\text{Efficiency index}} = \frac{\text{Actual unit cost}}{\text{Budgeted or standard unit cost}}$$

7. Cost-effectiveness ratio and performance ratio:

Cost-effectiveness ratio indicates the degree of goal attainment against cost.

$$\underline{\text{C/E Ratio}} = \frac{\text{Effectiveness index}}{\text{Total or unit cost}}$$

Performance ratio is a criterion by which to evaluate the degree of performance.

$$\underline{\text{Performance Ratio}} = \frac{\text{Effectiveness Index}}{\text{Efficiency Index}}$$

8. Student inputs:

Student input data may be considered for determining program objectives and outputs, and also for interpreting analytical results. The data include:

(1) Regular and special students,
(2) Personal--age, sex, race,
(3) Educational--needs achievements,
(4) Job experiences, and
(5) Family background--parents' income, and education level.

9. Community characteristics:

Community factors external to the school system may be considered for the design and operation of vocational programs, and interpretation of analytical results. They include:

(1) Community demand--population, employment, manpower demands, and
(2) Community support--economic resources, willingness to support vocational programs.

10. Economic and Non-economic benefits:

Economic and non-economic benefits are considered as long-range outputs of the school system.

(1) Economic benefits--earnings, employment, and occupational improvement, and
(2) Non-economic benefits--participation in governmental affairs, decrease of crime rates and public assistance recipients.

11. **Feedback:**

Feedback is a self-correcting mechanism, which relates educational efforts to community demand and support for the evaluation and planning of vocational programs. It indicates:

(1) Input-output relationships, and
(2) A recycling procedure for the planning, implementation and evaluation of vocational programs.

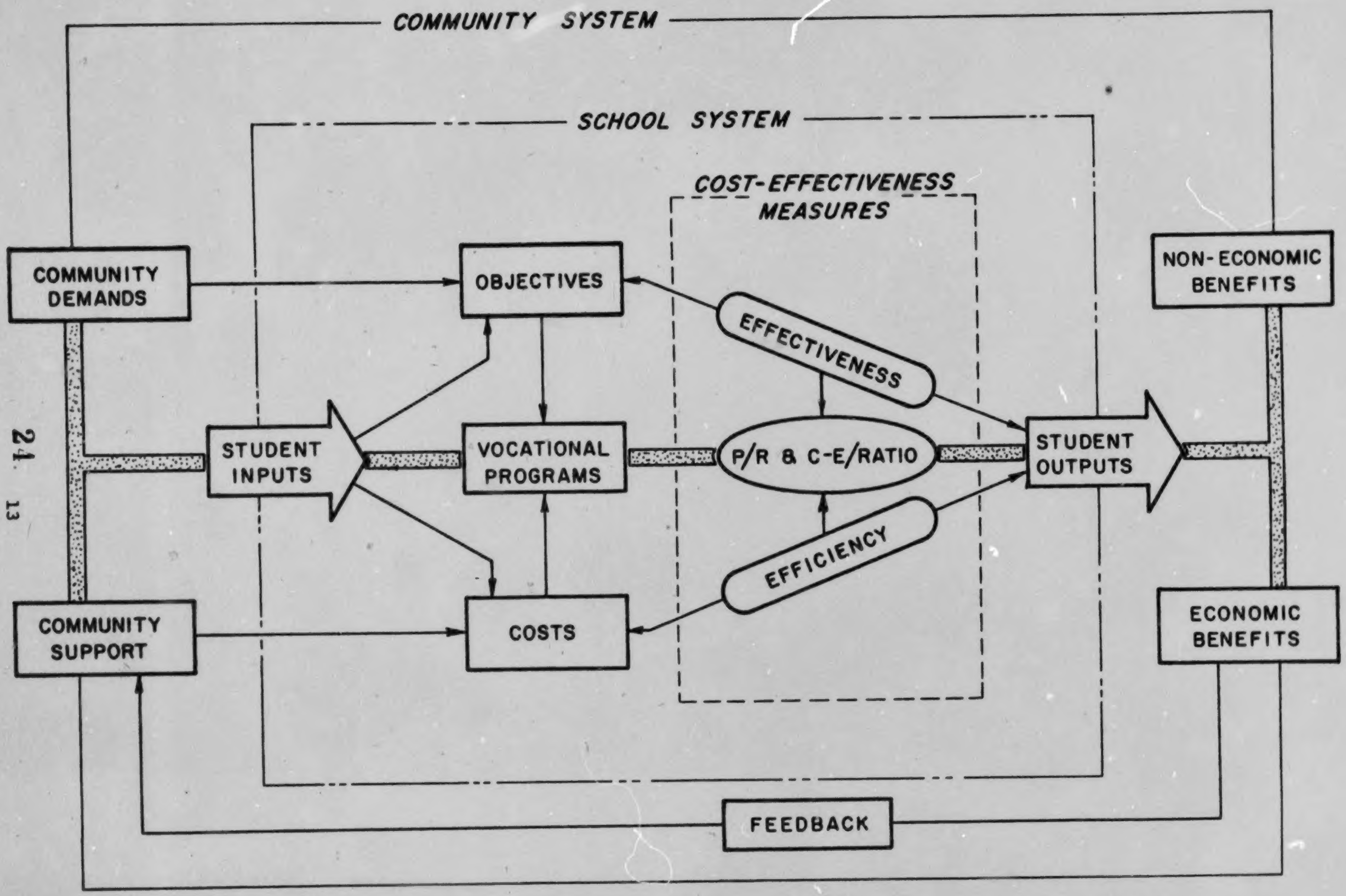


FIGURE 1

A CONCEPTUAL MODEL FOR THE ANALYSIS OF COST-EFFECTIVENESS FOR VOCATIONAL EDUCATION

D. *What is the procedure for a cost-effectiveness analysis?*

- The procedure for using the cost-effectiveness analysis model

A standard procedure was conceptualized for using the cost-effectiveness analysis. The procedure involves seven steps within three phases (See Figure 2).

1. Planning a cost-effectiveness analysis

The planning phase starts by determining the purposes of the analysis and provides a time schedule and appropriate resources for attaining the purposes. Thus, it includes three steps:

(1) Determine the purposes of a cost-effectiveness analysis
(2) Identify available resources for the analysis
(3) Develop a study plan

2. Implementing a cost-effectiveness analysis

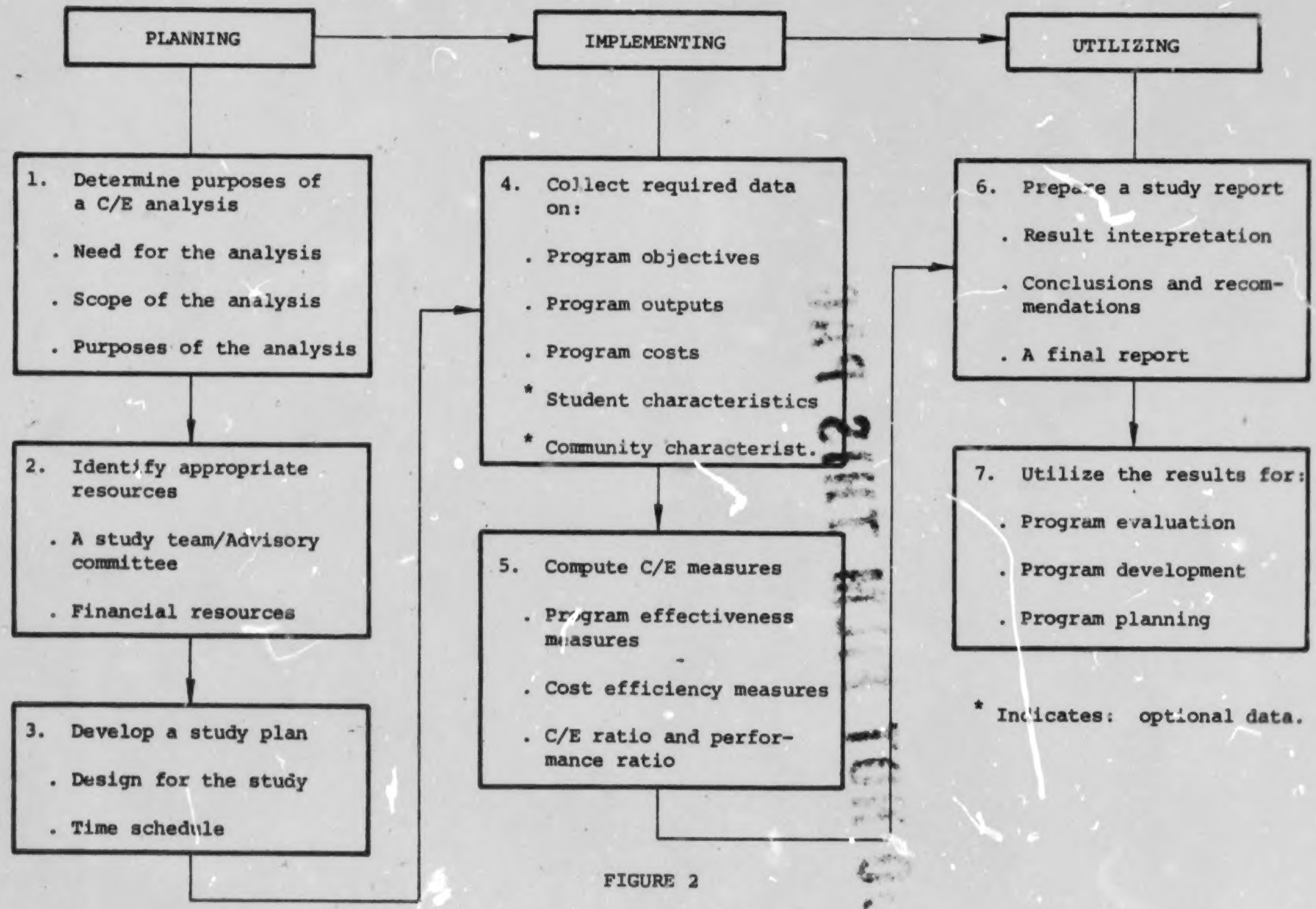
As scheduled in the plan, a cost-effectiveness analysis may be implemented. The implementing phase includes two steps:

(4) Collect the required data
(5) Compute the resulting measures

3. Utilizing the results from the analysis

The results from a cost-effectiveness analysis provide implications for program evaluation and can be used in the program planning and decision-making process. The utilizing phase is divided into two steps:

(6) Prepare a study report
(7) Utilize the results for program evaluation, development, and planning


PLANNING
IMPLEMENTING
UTILIZING
1. Determine purposes of a C/E analysis
. Need for the analysis
. Scope of the analysis
. Purposes of the analysis
2. Identify appropriate resources
. A study team/Advisory committee
. Financial resources
3. Develop a study plan
. Design for the study
. Time schedule
4. Collect required data on:
. Program objectives
. Program outputs
. Program costs
* Student characteristics
* Community characterist.
5. Compute C/E measures
. Program effectiveness measures
. Cost efficiency measures
. C/E ratio and performance ratio
6. Prepare a study report
. Result interpretation
. Conclusions and recommendations
. A final report
7. Utilize the results for:
. Program evaluation
. Program development
. Program planning

* Indicates: optional data.

FIGURE 2

PROCEDURE FOR USING THE
COST-EFFECTIVENESS ANALYSIS MODEL

CHAPTER III

Application of the Cost-Effectiveness Model

A. *What plan should be developed for implementing a cost-effectiveness analysis?*

B. *What activities should be executed for a cost-effectiveness analysis?*

C. *How can the analytical results be utilized for program evaluation, development, and planning?*

A. *What plan should be developed for implementing a cost-effectiveness analysis?*

- Planning for a Cost-Effectiveness Analysis

  In preparing a plan for implementing a cost-effectiveness analysis, there are three major considerations which should be taken into account:

  1. Determine the purposes of the analysis

     The first step is to determine the purpose of the analysis. Its needs and scope should be defined in specifying the purposes.

     1.1 Identify needs or anticipated information from the analysis
     1.2 Define the scope of the analysis
     1.3 Specify the purposes of the analysis

  2. Identify available resources for the analysis

     Human and financial resources available to the analysis should be identified.

     2.1 Organize a study team and/or advisory committee
     2.2 Identify financial resources

  3. Develop a study plan

     To meet analytical needs, a plan for a cost-effectiveness analysis should be developed with design of the analysis and a time schedule over the procedural activities.

     3.1 Design a cost-effectiveness study
     3.2 Develop a time schedule

  *The planning activities are specified with the indication of who will be responsible for, and what instruments will be available in the following forms:

STEP 1.1

Planning Activity	Who	Form
1.1 Identify needs or anticipated information from the analysis.	Vocational Director	FORM 1.1
Needs for the analysis will be defined by answering the following questions:		
Why do you need the analysis?		
(1) Evaluation of existing programs?		
(2) Development of new programs?		
(3) Program planning?		
What information do you need?		
(1) Vocational programs?		See Appendix A
(2) Program objectives?		See Appendix B
(3) Program outputs?		
(4) Program costs?		
(5) Program effectiveness measures?		
(6) Cost efficiency measures?		
(7) Cost-effectiveness/performance ratio?		
*A combination of your selections from the above alternatives will provide needs of the analysis.		

FORM 1.1

DETERMINATION OF NEEDS AND ANTICIPATED INFORMATION FROM COST-EFFECTIVENESS ANALYSES

Information	Program Evaluation	Program Development	Program Planning
1. What vocational programs will be analyzed? . ________ . ________ . ________	____ ____ ____	____ ____ ____	____ ____ ____
2. What program objectives or target goals will be analyzed? . ________ . ________ . ________	____ ____ ____	____ ____ ____	____ ____ ____
3. What program costs will be included? . Budgeted/actual costs? . Direct/indirect costs?	____ ____	____ ____	____ ____
4. Program effectiveness: . Objectives/target goals? . Degree of outputs? . Effectiveness measures?	____ ____ ____	____ ____ ____	____ ____ ____
5. Cost efficiency: . Unit cost per student, student hour or graduate? . Efficiency index?	____ ____	____ ____	____ ____
6. Cost-effectiveness/performance ratio: . Cost-effectiveness ratio? . Performance ratio?	____ ____	____ ____	____ ____

Planning Activity	Who	Form
1.2 Define the scope of the analysis.	Vocational Director	FORM 1.2
The scope of the analysis can be defined in terms of the following questions: What program or how many programs will you analyze? (1) One or more programs within a school (2) One or more programs between schools or school corporations What time periods will you consider? (1) Past year(s) (2) Current year (3) Future year(s) How will you analyze? (1) Description of independent data information (2) Measurement of effectiveness and/or efficiency (3) Relationship between effectiveness and efficiency		

FORM 1.2

DETERMINATION OF THE SCOPE OF COST-EFFECTIVENESS ANALYSES

What Programs	Within a school	Between schools	Year(s)	Degree of Analysis
01. Agriculture: ____________________ ____________________ ____________________	______ ______ ______	______ ______ ______	______ ______ ______	______ ______ ______
02. Distribution: ____________________ ____________________ ____________________	______ ______ ______	______ ______ ______	______ ______ ______	______ ______ ______
07. Health Occupations: ____________________ ____________________ ____________________	______ ______ ______	______ ______ ______	______ ______ ______	______ ______ ______
09. Home Economics: ____________________ ____________________ ____________________	______ ______ ______	______ ______ ______	______ ______ ______	______ ______ ______
14. Business and Office: ____________________ ____________________ ____________________	______ ______ ______	______ ______ ______	______ ______ ______	______ ______ ______
16. Technical: ____________________ ____________________ ____________________	______ ______ ______	______ ______ ______	______ ______ ______	______ ______ ______
17. Trade and Industry: ____________________ ____________________ ____________________	______ ______ ______	______ ______ ______	______ ______ ______	______ ______ ______

Planning Activity	Who	Form
1.3 Specify the purposes of the analysis and develop a "request for cost-effectiveness study."	Vocational Director	FORM 1.3

Based upon the needs and scope of the analysis, the purposes will be specified for:

(1) Improving program operational performance;

(2) Providing information needed in decision-making, or

(3) Improving public understanding and support for vocational programs.

Develop a "request for cost-effectiveness study."

The identified needs, scope and purposes will be summarized into a "request for study." The "request for study" will include:

(1) Purposes of the analysis,

(2) Scope of the analysis,

(3) Needed information,

(4) Maximum amount of available funds for the study, and

(5) Duration of the study.

FORM 1.3

REQUEST FOR COST-EFFECTIVENESS STUDY*

---

1. Purposes of cost-effectiveness analysis:

   (1) ______________________________

   (2) ______________________________

   (3) ______________________________

2. Scope of the analysis:

   (1) ______________________________

   (2) ______________________________

   (3) ______________________________

3. Needed information from the analysis:

   (1) ______________________________

   (2) ______________________________

   (3) ______________________________

4. Amount of available funds: $______________

5. Duration: From ____________ To ____________

---

*This narrative may be expanded to several pages, if appropriate.

Planning Activity	Who	Form
2.1 Organize a study team and assign responsibilities to the team leader and members.	Vocational Director	
A study team should be organized to implement a cost-effectiveness study. Specific responsibilities will be assigned to the team leader and members. Select team members and assign specific duties to them for the study, with the following considerations: (1) Involve key staff members in a decision-making process (2) Encourage staff participation in the study (3) In-service training workshop can be scheduled to provide participants with understanding of cost-effectiveness analysis concepts and techniques. Invite advisory committee members and consultants. An advisory committee will consist of representatives from the board, teachers, parents, and business. For technical assistance, if it is needed, invite consultants from professional institutions such as research agencies, or universities.	Vocational Director/ Team leader	

Planning Activity	Who	Form
2.2 Identify financial resources and make a budget for the study.	Vocational director/ Team leader	FORM 2.2
Appropriate financial resources should be available to implement the study. **Make a budget which will include the following items:** (1) Personnel: team leader/ members (2) Contracted services (3) Travel (4) Supplies and materials (5) Follow-up information (6) Report production (7) Others		

FORM 2.2

BUDGET NOTE
FOR A COST-EFFECTIVENESS STUDY

1. Personnel		
. Team leader =	____hrs X ____$/hr = ____	
. Team members =	____hrs X ____$/hr = ____	____
2. Contracted Services		
. Secretary	____hrs X ____$/hr = ____	
. Consultants	$____ X ____# = ____	____
3. Travel		
. Team leader/Members	____miles X ____¢/m = ____	
. Advisory Committee	____miles X ____¢/m = ____	____
4. Supplies and Materials	____	____
5. Follow-up data collection		
. Duplication of questionnaires	¢____ X ____# = ____	
. Mailing	¢____ X ____# = ____	
. Telephone calls	____	
	____	____
6. Report production	____	____
7. Other	____	____
8. Total		____

Planning Activity	Who	Form
3.1 Design the cost-effectiveness study Based upon the request for study, a design of the analytical study should be developed with consideration of school setting, program status, data types, and instruments needed for the study.	Study Team	Appendix C FORM 3.1
Specify the objectives of the study: (1) Evaluation of one or more vocational programs? (2) Comparison of two or more programs? (3) Development of alternative programs?		
Identify data types: The objectives will determine data types needed for the analysis. For program evaluation, historical and/or current data will be required; whereas estimated or projected data will be needed in planning new programs from the future perspective.		
Check the availability of data: (1) Student school records and follow-up data (2) Annual budgets and expenditures		FORM 3.1
Review the data collection instruments: (1) School corporation information data (2) Vocational instructional program data (3) Students' program rating scale (4) Employers' opinion on vocational training of employees (5) Vocational instructional program cost data		See Appendix C
Determine the date for the study: Appropriate time should be allocated for the completion of the study.		

FORM 3.1

CHECKLIST OF DATA TYPES NEEDED FOR COST-EFFECTIVENESS ANALYSES

	Availability		
School Records	Past	Current	Projected
S 1 - number of students enrolled in total school	___	___	___
S 2 - number of students who complete program requirements	___	___	___
S 3 - total of all students who are enrolled in program	___	___	___
S 4 - number of students with on-the-job experience (coop)	___	___	___
S 5 - number of student dropouts in vocational program	___	___	___
S 6 - number of student dropouts in total school	___	___	___
S 7 - number of disadvantaged students enrolled in vocational program	___	___	___
S 8 - number of disadvantaged students enrolled in school	___	___	___
S 9 - number of special education students in school	___	___	___
S10 - number of disadvantaged students completing program	___	___	___
S11 - number of disadvantaged students in work-study	___	___	___
S12 - number of handicapped student completions	___	___	___
S13 - number of exceptional student completions	___	___	___
S14 - number of sex minority enrolled	___	___	___
S15 - number of special education students enrolled in program	___	___	___

FORM 3.1
(continued)

	Availability		
School Records	Past	Current	Projected
S16 - number of special students enrolled in related or enabling skills	___	___	___
S17 - number of special students enrolled in related or enabling skills courses attaining minimum competencies	___	___	___
S18 - number of special students who complete program requirements	___	___	___
S19 - number of students participating in youth organizations	___	___	___
S20 - number of students receiving career counseling and guidance services	___	___	___
S21 - number of students receiving career development information	___	___	___
S22 - number of students enrolled in high need program	___	___	___
Follow-up data			
F 1 - number of students rating program as satisfactory	___	___	___
F 2 - number of special students rating program satisfactory	___	___	___
F 3 - number of students recommending program to other students	___	___	___
F 4 - number of special students recommending program to other students	___	___	___
F 5 - number of students employed	___	___	___
F 6 - number of student graduates available for employment	___	___	___
F 7 - number of students employed in their specialty	___	___	___
F 8 - number of students employed in specialty and/or related area	___	___	___

FORM 3.1
(continued)

Follow-up data	Availability		
	Past	Current	Projected
F 9 - number of students who didn't finish program who are employed in area in which they were being trained	____	____	____
F10 - number of students who didn't complete program and available for full-time work	____	____	____
F11 - number of students passing licensed examinations	____	____	____
F12 - number of students who apply and take examination	____	____	____
F13 - number of employed satisfied with their job	____	____	____
F14 - number of employed indicating adequately prepared	____	____	____
F15 - number of students indicating adequately prepared to work with others	____	____	____
F16 - number of students rating youth activities as meeting their needs	____	____	____
F17 - number of students indicating adequate career counseling and guidance	____	____	____
F18 - number of students rating career information as influential in career choice	____	____	____
F19 - number of student completions working in community	____	____	____
F20 - number of students working and seeking external employment	____	____	____
F21 - number of students enrolled in advanced study	____	____	____
F22 - number of students enrolled in area of speciality	____	____	____
F23 - number of students enrolled in area of specialty and/or related area	____	____	____

FORM 3.1
(continued)

Follow-up data	Availability Past	 Current	 Projected
F24 - number of students rating programs as instrumental for advanced study	____	____	____
F25 - number of students indicating programs prepared them for advanced study	____	____	____
F26 - number of employers that value vocational education as a source of trained manpower	____	____	____
F27 - number of employers indicating vocational preparation as critical	____	____	____
F28 - number of employers ranking employees as "fairly skilled" or above	____	____	____
F29 - number of employees indicating advancement related to vocational program	____	____	____
F30 - number of employers rating employees' maturity factors as "good" or above	____	____	____

Cost analysis data (Budgets/Expenditures)			
C 1 - Salaries of teaching staff	____	____	____
C 2 - Fringe benefits for teaching staff	____	____	____
C 3 - Travel costs for instruction	____	____	____
C 4 - Instructional supplies and materials costs	____	____	____
C 5 - Classroom furniture and laboratory equipment cost	____	____	____
C 6 - Building use cost	____	____	____
C 7 - Student services	____	____	____
C 8 - Instructional staff services	____	____	____
C 9 - General administration services	____	____	____
C10 - School administration services	____	____	____

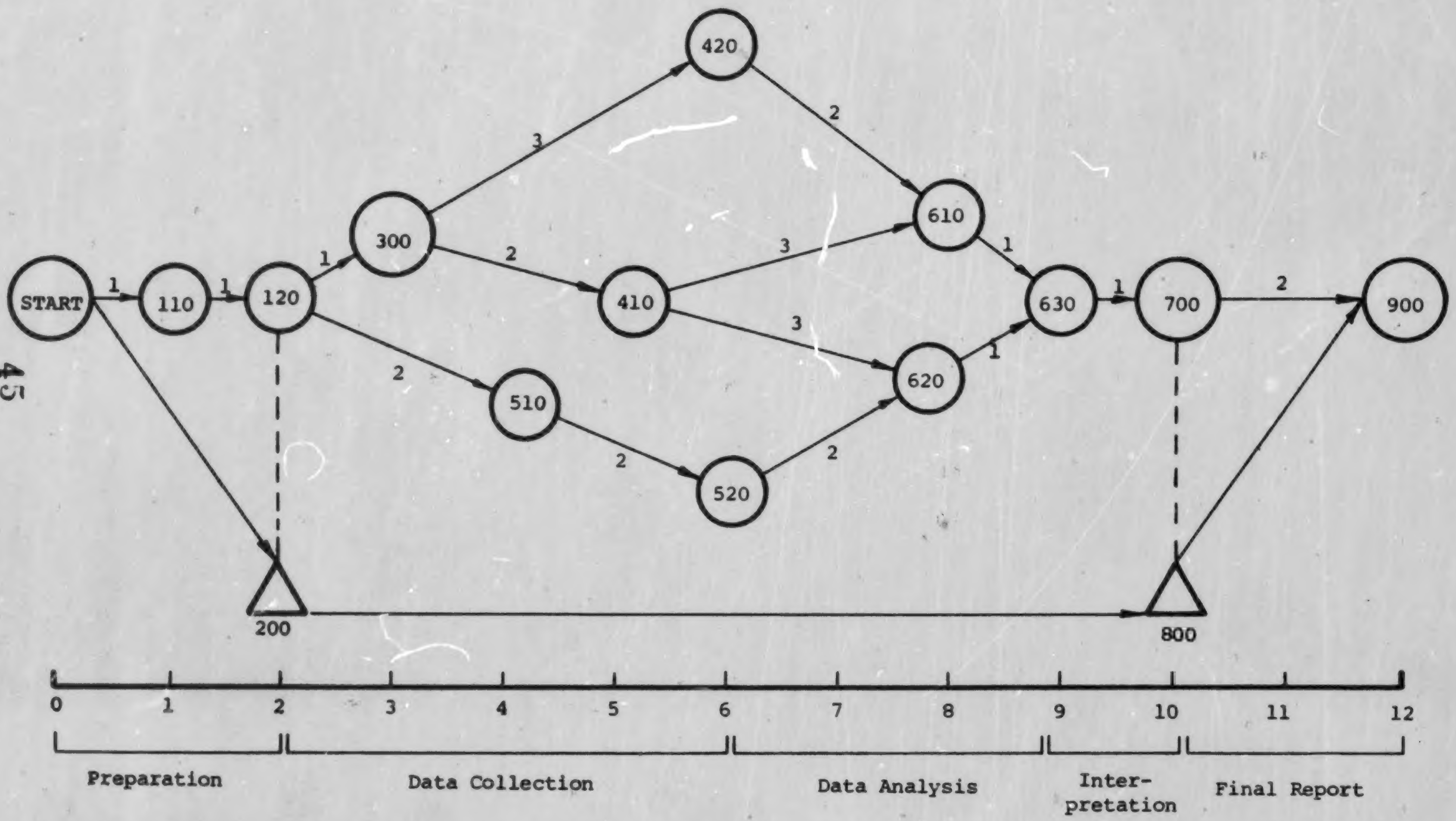
FORM 3.1
(continued)

	Availability		
Cost analysis data (Budgets/Expenditures)	Past	Current	Projected
C11 - Business services	____	____	____
C12 - Central support services	____	____	____
General information			
G 1 - Full-time equivalent teachers	____	____	____
G 2 - Student average daily membership and contact hours	____	____	____
G 3 - Building floor and time in use for instruction	____	____	____

Planning Activity	Who	Form
3.2 Develop a time schedule for the study A time schedule should be made over the procedural activities from start to completion of the study.	Study team/ Members	FORM 3.2
Procedural activities and events are coded to make a network diagram.		
100. Preparation for the study 110. Review of the model 120. Conference/Workshop 200. Advisory committee meeting (1)	Vocational Director/ Study team/ Advisory Committee	
300. Definition of program objectives/ target goals: 310. Selection of objectives 320. Identification of target goals	Study team	
400. Collection of program output data: 410. Review of school records 420. Survey of follow-up information	Study team	
500. Collection of program cost data: 510. Assignment of direct costs 520. Proration of indirect costs	Study team	
600. Analysis of data: 610. Computation of program effectiveness 620. Computation of cost efficiency 630. Computation of C/E ratio and performance ratio	Study team	
700. Interpretation of analytical results: 800. Advisory committee meeting (2)	Vocational Director/ Study team/ Advisory Committee	
900. Preparation of the report	Team leader	

FORM 3.2

NETWORK DIAGRAM FOR COST-EFFECTIVENESS STUDY
AN ILLUSTRATION FOR 12-WEEK SCHEDULE



B. *What activities should be executed for a cost-effectiveness analysis?*

- Implementing a Cost-Effectiveness Analysis

After a plan for a cost-effectiveness analysis is approved, as scheduled in the plan, the implementing activity will be executed for collecting required data and computing cost-effectiveness measures.

4. Collect required data

   Data required for each of the components in a cost-effectiveness analysis should be collected.

   4.1 Determine program objectives/target goals
   4.2 Collect program outputs/follow-up data
   4.3 Analyze costs of vocational programs

5. Compute cost-effectiveness measures

   After required data are collected, planned analytical techniques will be executed to:

   5.1 Compute program effectiveness measures
   5.2 Compute cost efficiency measures
   5.3 Compute cost-effectiveness ratio and performance ratio

*The implementing activity is more specified by each component with the indication of who will be responsible and what instruments will be available in the following forms:

STEP 4.1

Implementing Activity	Who	Form
4.1 Define program objectives and target goals.	Vocational Director/ Study Team	Appendices: B & D FORM 4.1
Program objectives should be reviewed and specified into measurable terms. The following procedures can be taken into consideration:		
Refer to a seven-category objectives of the program and their specifications		See Appendix B
A set of program objectives are developed for determination of specified target goals of the Vocational program.		
Select a number of objectives and specifications		
Considering the program relativeness and data availability, a number of objectives and specifications can be selected from among the seven objective categories.		
For instance, Objective 2 will be appropriate to the program enrolling students with special needs.		
Specified goals within an objective category may be chosen according to policy preferences or data availability.		
Explore or set forth target goals		See Appendix D
Already assigned target goals can be identified. Otherwise, appropriate target goals should be set forth by the authority from the future perspective, based upon Appendix D.		
Put determined program objectives/ target goals into FORM 4.1		FORM 4.1

FORM 4.1

DETERMINATION OF SELECTED PROGRAM OBJECTIVES/TARGET GOALS

Instructional Programs	Selected Objectives: (1-a)	(1-b)								
	Target Goals:									
•										
•										
•										
•										
•										
•										
•										
•										
•										
•										

Implementing Activity	Who	Form
4.2 Collect program output data including follow-up information and identify output measures.	Study team	Appendix C: (II) (III) (IV) Appendix D FORM 4.2
In accordance with program objectives, program output data should be collected to identify actual performances of each objective. That is the extent to which target goals are achieved when completing the vocational program or after graduation.		
For program planning, however, anticipated target goals can be referred to as outputs of the program objective.		
In relation to the selected predetermined target goals, collect needed data through:		
(1) School records/documents analysis, and		See Appendix C: (II)
(2) Follow-up information		See Appendix C: (III) (IV)
Identify program output measures, using Appendix D:		See Appendix D
For example, a completion rate of students will be made by dividing the number of students who completed the vocational program over the number of students enrolled in the program.		
Put output information into Form 4.2		FORM 4.2
Then, it is ready to compute program effectiveness scores. It may procede or wait until cost analysis.		

FORM 4.2

INDICATORS OF SELECTED PROGRAM OUTPUTS

	Selected Objectives:									
	(1-a)	(1-b)	______	______	______	______	______	______	______	______
Instructional Programs	Indicators of Selected Outputs:									
. ______________	______	______	______	______	______	______	______	______	______	______
. ______________	______	______	______	______	______	______	______	______	______	______
. ______________	______	______	______	______	______	______	______	______	______	______
. ______________	______	______	______	______	______	______	______	______	______	______
. ______________	______	______	______	______	______	______	______	______	______	______
. ______________	______	______	______	______	______	______	______	______	______	______
. ______________	______	______	______	______	______	______	______	______	______	______
. ______________	______	______	______	______	______	______	______	______	______	______
. ______________	______	______	______	______	______	______	______	______	______	______
. ______________	______	______	______	______	______	______	______	______	______	______

Implementing Activity	Who	Form
4.3 Collect program cost data for instruction and supporting services. Cost data may be classified into direct and indirect categories. They can be analyzed on the basis of budget and/or expenditures.	Study team/ Business manager	Appendix C: (V) FORM 4.3
Assign the following item costs to a program and add them to be a direct cost for instruction. (1) Salaries of teaching staff (2) Fringe benefits (3) Travel costs (4) Supplies and materials (5) Replacement of instructional equipments (6) Building use for instruction		Use Appendix C: (V)
Prorate current expenditures for the following supporting services to a program by using appropriate allocation bases. (1) Student services (2) Teaching staff services (3) School administration (4) General administration (5) Business services (6) Central services		Use Appendix C: (V)
Identify a total cost of a program. A total cost of a program is direct costs plus indirect costs prorated to the vocational program.		Use Appendix C: (V)
Summarize analyzed program costs into Form 4.3.		FORM 4.3

FORM 4.3

COSTS OF VOCATIONAL PROGRAMS

(1) Instructional Programs	(2) Salary Cost (Form V-1 Col. 2)	(3) Fringe Benefit Cost (Form V-2 Col. 5)	(4) Travel Cost (Form V-3 Col. 4)	(5) Supplies & Materials Cost (Form V-4 Col. 5)	(6) Equipment & Furniture Cost (Form V-7 Col. 8)	(7) Building Use Cost (Form V-9 Col. 8)	(8) Other Direct Costs (Form V-10 Col. 2)	(9) Prorated Supporting Service Cost (Form V-12 Col. 2)	(10) Total Instructional Program Cost
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									
11.									
12.									
13.									
14.									
15.									
16.									
17.									
18.									
19.									
20.									
TOTAL									

Implementing Activity	Who	Form
5.1 Compute program effectiveness measures for vocational programs.		
Program effectiveness measures can be developed by the degrees of goal attainments and can be combined into an effectiveness index.	Study team/ Supervisors	Appendix E FORM 5.1-1 & 2
Compute effectiveness scores for a program.		FORM 5.1-1
Program effectiveness (PE) score is expressed by percent of goal attainment as follows:		
PE (%) = $\frac{\text{Output}}{\text{Goal}}$ X 100		
Based on data appearing in Forms 4.1 and 4.2, an effectiveness score of each selected goal attainment can be computed.		
And also the score can be weighted, if it is necessary, as illustrated in Appendix E.		See Appendix E
Draw a program effectiveness index as follows:		FORM 5.1-2
Composite Program Effectiveness (CPE). A sum of all effectiveness scores.		
Average Program Effectiveness (APE). A sum of effectiveness scores divided by number of scores.		
Weighted Composite Program Effectiveness (WCPE). A sum of weighted effectiveness scores according to the degree of importance or policy preferences.		
Weighted Average Program Effectiveness (WAPE). A sum of weighted effectiveness scores divided by number of weighting points.		

FORM 5.1-1

PROGRAM EFFECTIVENESS SCORES OF SELECTED OBJECTIVES

Selected Objectives:

	(1-a)	(1-b)								
Instructional Programs	Program Effectiveness Scores:									
•										
•										
•										
•										
•										
•										
•										
•										
•										
•										

FORM 5.1-2

PROGRAM EFFECTIVENESS INDICES
FOR VOCATIONAL PROGRAMS

Instructional Program	Program Effectiveness Index*			
	CPE	APE	WCPE	WAPE
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				

*The Effectiveness Index used for analysis is selected by individual conditions.

Implementing Activity	Who	Form
5.2 Compute cost efficiency measures for vocational programs. Cost efficiency is measured by a unit cost for a program. Also, it may be indexed as a ratio of actual unit cost over budgeted unit cost.	Study team/ Business Manager	FORM 5.2
Compute unit costs for a program. Three kinds of unit costs can be made, alternatively. (Use only one.) Cost per student: Total program cost divided by total number of students or average daily membership (ADM) within the program. Cost per student contact hour: Total cost divided by total number of student contact hours within the program. Cost per completion: Total cost divided by number of students completed. Compute a Cost Efficiency Index (CEI) for the program. Actual (expended) cost per student divided by budgeted cost per student.		

FORM 5.2

COST EFFICIENCY MEASURES FOR VOCATIONAL PROGRAMS, USING UNIT COST PER STUDENT*

Instructional Programs (1)	Total Cost		Number of Students (4)	Cost/Student		CEI Actual/Budgeted (2)/(3)
	Actual (2)	Budgeted (3)		Actual (2) (4)	Budgeted (3)/(4)	
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						
16.						
17.						
18.						
19.						
20.						

*An alternative method is to use unit cost per student contact hour or cost per completion.

Implementing Activity	Who	Form
5.3 Compute a cost-effectiveness/performance ratio for vocational programs. Based on the measures of program effectiveness and cost efficiency, a cost-effectiveness ratio and performance ratio can be computed.	Study team/ Supervisors/ Business Manager	FORM 5.3
Draw a cost-effectiveness ratio (C/ER) A cost-effectiveness ratio can be made by dividing a program effectiveness index by actual unit cost per student as follows: $\text{C/E Ratio} = \frac{\text{Program Effectiveness (APE or WAPE)}}{\text{Actual Unit Cost per Student}}$ Draw a performance ratio (PR) Performance ratio can be drawn from the division of program effectiveness over cost efficiency index (CEI). It is expressed by: $\text{PR} = \frac{\text{Program Effectiveness (APE or WAPE)}}{\text{Cost Efficiency Index (CEI)}}$		

FORM 5.3

COMPUTATION OF COST-EFFECTIVENESS RATIO AND PERFORMANCE RATIO, USING UNIT COST PER STUDENT*

Instructional Programs (1)	APE or WAPE** (2)	Cost/ Student*** (3)	CEI*** (4)	C/E Ratio (2)/(3)	Performance Ratio (2)/(4)
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					

*An alternative method is to use unit cost per student contact hour or cost per completion.

**From Form 5.1-2

***From Form 5.2

C. *How can the analytical results be utilized for program evaluation, development, and planning?*

- Utilizing the results from the analysis

  A study report should be made to decision-makers so that they may utilize the results in reaching decisions pertaining to program evaluation, development, and planning.

6. Prepare a study report

   The resulting cost-effectiveness measures should be interpreted and discussed among the concerned people. Then a study report, including conclusions and recommendations, will be made.

   6.1 Interpret the results
   6.2 Draw conclusions and recommendations
   6.3 Write a report

7. Utilize the results

   Based on the conclusions and recommendations, analytical results can be utilized for program evaluation, development, and planning.

   7.1 Use results for program evaluation
   7.2 Use them for program development
   7.3 Apply them to program planning

*The utilizing activity is specified with the indication of who will be responsible in the following:

Utilizing Activity	Who	Form
6.1 Interpret the results from the study. The results from the analysis should be interpreted with careful consideration.	Vocational Director/ Study team	
Program effectiveness measures will be employed to judge how effective the program is. At the moment, the following points should be taken into consideration: (1) Were program objectives appropriately selected? (2) Were target goals adequately determined? (3) What effectiveness measures are most reliable to judge program effectiveness? In interpreting cost efficiency measures, the following questions will be critical: (1) What budget items were involved in determining costs for a vocational program? (2) How were costs assigned or prorated to the program? (3) What efficiency measures are most reliable to judge if the program was implemented in an efficient way? A cost-effectiveness ratio can be referred to as a criterion in judging program effectiveness in relation to the associated costs. Furthermore, performance ratio indicates the degree of program management performance, based on the program effectiveness and cost efficiency. For a comparison of two or more programs, caution should be given to the following additional points: (1) Are effectiveness scores and index made upon the same basis of goal targets between programs? (2) Are efficiency measures and index made upon the same cost items between programs? (3) Are there common characteristics of students between programs?		

Utilizing Activity	Who	Form
6.2 Draw conclusions and recommendations. Based upon the results and interpretation, conclusions and recommendations will be made and discussed among the concerned people.	Vocational Director/ Study team/ Advisory Committee/ Teachers	

Draw conclusions from the results.

An evaluative study will draw conclusions upon the following remarks:

(1) How effective is the program?
(2) How efficient is the program?
(3) What is the relationship between program effectiveness and cost efficiency?

Furthermore, in program comparisons, conclusions will be made on:

(1) Which program is most effective among studied programs?
(2) Which program is most efficent?
(3) Which program is most effective and efficient?

Develop recommendations for further actions.

Based on the conclusions, recommendations will be developed for further actions:

(1) To increase program effectiveness with the given resources.
(2) To allocate additional resources to most effective and/or efficient programs.

Discuss conclusions and recommendations among the concerned people.

The conclusions and recommendations should be discussed among the concerned people and be referred to the advisory committee.

Utilizing Activity	Who	Form
6.3 Prepare a final report. Through discussion of the results, conclusions and recommendations, a final report should be made to decision-makers.	Study team	
The report would include: (1) Objectives of the study, (2) Procedures for the study, (3) Program objectives and target goals, (4) Actualized outputs from the program, (5) Program costs, (6) Cost-effectiveness measures, and (7) Conclusions and recommendations		

Step 7.1

Utilizing Activity	Who	Form
7.1 Use the report for program evaluation. Based upon the recommendations, cost-effectiveness measures can be used in evaluating existing vocational programs.	Board members/ Administrator/ Vocational Director/ Teachers	
Make relative judgements by ranking programs in order. Referring to cost-effectiveness measures, relative judgements on program effectiveness and cost efficiency will be made among the given programs. Relate program effectiveness to cost implications. It would be possible to identify factors influencing the determination of program costs and explain the relationship between program effectiveness and cost implications. Develop strategies for increasing effectiveness or efficiency. A final decision will be made to develop strategies for increasing program effectiveness and/or cost efficiency.		

Utilizing Activity	Who	Form
7.2 Use the report in developing new programs. Cost-effectiveness measures would provide decision-makers with information on the need for new program development.	Board members/ Administrator/ Vocational Director	
Make a judgement on the need for revising an on-going program. If a program is found to be very ineffective and inefficient, a judgement should be made to determine if the program should be modified or deleted. Develop strategies for modifying the program or identifying an alternate new program. A final decision will be made to develop strategies either modifying the program or developing a new alternate program.		

Utilizing Activity	Who	Form
7.3 Utilize the report for program planning. The analytical results and recommendations will provide a basis for a future plan for the improvement of vocational education programs.	Board members/ Administrator/ Vocational Director	
Develop a short-range plan for minor change and improvement in vocational education. Based on the decision pertaining to program evaluation, a short-range (one or two-year) plan will be developed for increasing program effectiveness and/or cost efficiency. Develop a long-range (five-year) plan for the improvement of overall vocational programs. A long-range plan should be made in order to implement development strategies for the improvement of overall vocational programs as well as the development of new alternate vocational programs from long-term perspectives.		

CHAPTER IV

Conclusion

A. *What are concluding remarks?*

B. *What are further suggestions for using the manual?*

A. *What are concluding remarks?*

- Concluding Remarks

The manual is developed to guide locally directed cost-effectiveness studies for secondary vocational program evaluation, development, and planning. In using the manual, the following points pertain:

1. Administrative awareness and commitment to cost-effectiveness analysis of vocational programs is a key point to success in the analysis.
2. Through discussion of needs and scope of the analysis, and human/financial resources, a study plan should be developed to include specific design and time schedule.
3. In determining program objectives/target goals, student/community characteristics information should be fully considered and concerned people should be involved in the decision-making process.
4. According to a standardized accounting system, program costs should be accounted and analyzed, in particular, when comparing cost efficiency among vocational programs.
5. Cost-effectiveness measures, as computed in the manual, are relatively inclusive criteria in evaluating program effectiveness and cost efficiency. The measures may not be used as absolutely exclusive criteria in the decision-making process.
6. Cost-effectiveness analyses should be continued as a recycling process. The repeating analyses based on accumulated data will increase the utility of the analysis.

B. What are further suggestions for using the manual?

- **Further Suggestions**

Although the manual was designed to assist local vocational administrators, its use may be extended. And also the manual will be revised by cumulated efforts.

1. Even though the manual was focused upon secondary vocational programs, the basic conceptual and analytical procedures may be applied to post-secondary vocational program evaluation and planning as well.
2. As a simulation for cost-effectiveness analysis, the manual can be used in training prospective vocational administrators as well as for in-service administrators' workshops.
3. Additional research will be needed for defining program objectives and standardizing cost analysis. Based upon the cumulated efforts, the manual should be revised periodically for general use.

APPENDIX A

APPENDIX A

A Program Classification of Vocational Program Areas, Sub-program Areas and/or Courses

OE Code	Program	Available (✓) at the Secondary Level
01.0000	Agriculture	
01.0100	Agricultural Production	
01.0200	Agricultural Supplies/Services	
01.0300	Agricultural Mechanics	
01.0400	Agricultural Products	
01.0500	Ornamental Horticulture	
01.0600	Agricultural Resources	
01.0700	Forestry	
01.9900	Other	
04.0000	Distribution	
04.0100	Advertising Services	
04.0200	Apparel and Accessories	
04.0300	Automotive	
04.0400	Finance and Credit	
04.0500	Floristry	
04.0600	Food Distribution	
04.0700	Food Services	
04.0800	General Merchandise	
04.0900	Hardware, Building Materials	
04.1000	Home Furnishings	
04.1100	Hotel and Lodging	
04.1200	Industrial Marketing	
04.1300	Insurance	
04.1400	International Trade	
04.1500	Personal Services	
04.1600	Petroleum	
04.1700	Real Estate	
04.1800	Recreation and Tourism	
04.1900	Transportation	
04.9900	Other	
07.0000	Health	
07.0101	Dental Assistant	
07.0102	Dental Hygienist (associate degree)	
07.0103	Dental Laboratory Technology	
07.0203	Medical Laboratory Assisting	
07.0299	Other Medical Laboratory Technology	
07.0301	Nursing (associate degree)	
07.0302	Practical (vocational) Nursing	
07.0303	Nursing Assistant (aide)	
07.0401	Occupational Therapy	
07.0402	Physical Therapy	

APPENDIX A (continued)

OE Code	Program	Available (√) at the Secondary Level
07.0501	Radiologic Technology	
07.0700	Environmental Health	
07.0800	Mental Health Technology	
07.0903	Inhalation Therapy	
07.0904	Medical Assistant	
07.0906	Health Aide	
07.9900	Other	
09.0200	Occupational Preparation, Home Economics	
09.0201	Care and Guidance of Children	
09.0202	Clothing MGMT., Production and Services	
09.0203	Food Management, Production and Services	
09.0204	Home Furnishing, Equipment and Services	
09.0205	Institutional & Home Management & Services	
09.0299	Other	
14.0000	Office	
14.0100	Accounting and Computing Occupations	
14.0200	Business Data Processing Systems Occupations	
14.0300	Filing, Office Machines, Clerical Occupations	
14.0400	Information Communication Occupations	
14.0500	Materials Support, Transportation, Etc.	
14.0600	Personnel Training and Related Occupations	
14.0700	Steno, Secretarial and Related Occupations	
14.0800	Supervisory and Admin. Management Occupations	
14.0900	Typing and Related Occupations	
14.9900	Other	
16.0000	Technical	
16.0101	Aeronautical Technology	
16.0103	Architectural Technology	
16.0104	Automotive Technology	
16.0106	Civil Technology	
16.0107	Electrical Technology	
16.0108	Electronic Technology	
16.0110	Environmental Control Technology	
16.0111	Industrial Technology	
16.0113	Mechanical Technology	
16.0601	Commercial Pilot Training	
16.9901	Air Pollution Technology	
16.9902	W and Waste Water Technology	
16.9900	Other	

APPENDIX A (continued)

OE Code	Program	Available (✓) at the Secondary Level
17.0000	Trades and Industry	
17.0100	Air Conditioning	
17.0200	Appliance Repair	
17.0301	Body and Fender Repair	
17.0302	Auto Mechanics	
17.0399	Other Automotive	
17.0400	Aviation Occupations	
17.0500	Blueprint Reading	
17.0600	Business Machine Maintenance	
17.0700	Commercial Art Occupations	
17.1001	Carpentry	
17.1002	Electricity	
17.1004	Masonry	
17.1007	Plumbing and Pipefitting	
17.1099	Other Construction and Maintenance	
17.0900	Commercial Photography Occupations	
17.1100	Custodial Service	
17.1200	Diesel Mechanic	
17.1300	Drafting Occupations	
17.1400	Electrical Occupations	
17.1500	Electronic Occupations	
17.1600	Fabric Maintenance Services	
17.1700	Foremanship, Supervision and Mgt. Development	
17.1900	Graphic Arts Occupations	
17.2200	Maritime Occupations	
17.2300	Metalworking Occupations	
17.2400	Metallurgy Occupations	
17.2601	Barbering	
17.2602	Cosmetology	
17.2700	Plastics Occupations	
17.2801	Fireman Training	
17.2802	Law Enforcement Training	
17.2900	Quantity Food Occupations	
17.3000	Refrigeration	
17.3100	Small Engine Repair	
17.3300	Textile Production and Fabrication	
17.3400	Leather Working	
17.3500	Upholstering	
17.3600	Woodworking Occupations	
17.9900	Other	

APPENDIX B

APPENDIX B

PROGRAM OBJECTIVES AND TARGET GOALS

OBJECTIVE 1. *Aid students enrolled in vocational education to successfully complete a secondary occupational program.*

1-a. _____ percent of the student population will be enrolled in the secondary vocational program during the 19__ - 19__ school year.

1-b. _____ percent of the students will complete the program requirements.

1-c. _____ percent of the student completions will have on the job occupational experience.

1-d. _____ percent less dropout rate will occur in the vocational program than the total dropout rate for the entire school.

1-e. _____ percent of the student completions will rate their program as satisfactorily meeting their educational goals.

1-f. _____ percent of the student completions will indicate they would recommend their vocational program to other students.

OBJECTIVE 2. *Assist special student groups to successfully achieve in a secondary vocational program.*

2-a. _____ percent of the persons identified as special education students will be enrolled in the vocational program (mainstream).

2-b. _____ percent of the disadvantaged students will be enrolled in the vocational program.

2-c. _____ disadvantaged persons (economically and/or educationally) will complete the secondary vocational program.

2-d. _____ disadvantaged students (economically and/or educationally) will participate in work-study programs.

2-e. _____ handicapped persons (physical and/or mental) will successfully complete the secondary vocational program.

2-f. _____ exceptional youth will complete the secondary vocational program.

2-g. _____ percent of the students enrolled will represent the sex minority in those programs traditionally considered sex-stereotyped.

2-h. _____ percent of the students classified in special student groups who can benefit from a related or enabling skills course will be enrolled in such courses.

2-i. _____ percent of the students enrolled in related or enabling skills courses will attain minimum competencies in order to benefit from vocational or preparatory programs.

2-j. _____ percent of the students classified in special student groups will rate their vocational program as satisfactorily meeting their educational goals.

2-k. _____ percent of the special student group completions will indicate they would recommend their vocational program to other students.

OBJECTIVE 3. *Provide vocational education for secondary school youth in accordance with their occupational preparation.*

3-a. _____ percent of the students available for and having sought employment will be employed full-time in less than fifteen weeks after graduation. (Consider military and apprenticeships as employed.)

3-b. _____ percent of the graduates available for and having sought employment in their specialization will be employed in their specialization in less than fifteen weeks after graduation. (Include military and apprenticeships if in the area of specialization.)

3-c. _____ percent of the graduates available for employment will be employed in their specialization or in a position they considered related to their area in less than fifteen weeks after graduation. (Include military and apprenticeships if in specialization or related area.)

3-d. _____ percent of the enrollees who terminate schooling before completing program requirements will find their first full-time job in the occupation for which they were being trained or a related area. (Include military and apprenticeships if in specialization or related area.)

3-e. _____ percent of the graduates of any licensed occupation program (who apply and take) will pass the appropriate examination.

3-f. _____ percent of the students responding on a follow-up study will indicate they are satisfied with their job.

3-g. _____ percent of the students employed six (6) months after graduation will indicate that their skill preparation was adequate for their present job.

APPENDIX B (continued)

3-h. _____ percent of the graduates will indicate they were adequately prepared to work with supervisors, co-workers and subordinates.

OBJECTIVE 4. *Provide leadership development activities for students enrolled in vocational programs through a youth organization functioning as an integral part of the vocational instruction.*

4-a. _____ percent of the students enrolled in the vocational program will have taken an active part in (youth organization, i.e., VICA, FFA, FHA, etc.) activities for the school year.

4-b. _____ percent of youth organization participants will rate the activities as meeting their needs and interests.

OBJECTIVE 5. *Provide guidance and counseling services (career development) information appropriate to continued education or employment for students enrolled in vocational programs.*

5-a. _____ vocational students will receive career counseling and guidance services.

5-b. _____ students will receive career development information during the school year 19 __ - 19 __.

5-c. _____ percent of the students will indicate career guidance and counseling services as adequate after completion of their vocational program.

5-d. _____ percent of the students receiving exploratory career information will rate the experience as having influence on their career choice.

OBJECTIVE 6. *Provide vocational programs to fulfill the requirement of the labor markets and the employment community manpower needs.*

6-a. _____ percent of the student completions will be working in the employment community serviced by the school corporation.

6-b. _____ percent of the student completions will seek employment external to the employment community in which they were trained.

6-c. _____ percent of all students will be enrolled in the vocational program that is considered to have high employment community and manpower occupational needs. (Projected)

APPENDIX B (continued)

6-d. _____ employers will value the vocational program as a source of trained manpower.

6-e. _____ employers will indicate that the employees' vocational preparation was critical in the employment decision.

6-f. _____ employers will rank the employees' skill and knowledge level at a minimum of fairly skilled or above.

6-g. _____ employers will indicate job advancement is related to training received in the vocational education programs.

6-h. _____ employers will rate the employees on the job maturity factors at a minimum mean of good or above.

OBJECTIVE 7. *Encourage vocational graduates to continue their education after completion of their secondary program*

7-a. _____ percent of the students who complete the vocational program will be enrolled in advanced study programs.

7-b. _____ percent of the students enrolled in advanced study programs will be in the same program specialty as their secondary vocational program.

7-c. _____ percent of the students enrolled in advanced study programs will be in their specialization or programs which they considered related to their secondary vocational program.

7-d. _____ percent of the students enrolled in advanced study programs will rate their secondary vocational program as instrumental in their decision to continue their education.

7-e. _____ percent of the students enrolled in advanced study programs will indicate their vocational program prepared them for their pursuit of advanced study.

APPENDIX C

School Corporation Information*

C/E FORM I-1. FACULTY FTE, STUDENT AVERAGE DAILY MEMBERSHIP AND CONTACT HOURS

(1) School	(2) Total FTE	Average Daily Membership (3) Female	(4) Male	(5) Total		(6) Total School Hours Per Year		(7) Total Student Contact Hours
1. Corporation					X	1080	=	
2. Special Students	▨					▨		▨
2a. Disadvantaged	▨					▨		▨
2b. Gifted	▨					▨		▨
2c. Handicapped	▨					▨		▨

C/E FORM I-2. BUILDING SPACE, USE, AND TIME/FLOOR DATA**

(1) Building(s)	(2) Total Sq. Ft. Space For Instructional Building(s)		(3) Number Hours In Use***		(4) Time/Floor Unit		(5) Percent of Time/Floor
1. Vocational		X		=		=	
					÷		
2. Corporation		X		=			

*Corporation is defined as the level at which budget and expenditures are expressed. (K-12, High School, or Area Center)

**If all budgets and expenditures at area center level or vocational level, only Line 1 needs to be filled out.

***Entry for Line 1, Column 3 can be obtained for Column 5, Form V-8. Entry for Line 2, Column 3 is the product of average hours per school day for corporation X number of school days X the number of classrooms in corporation.

APPENDIX C continued

Secondary Vocational Instructional Program Data

C/E FORM II-1. PROGRAM AVERAGE DAILY MEMBERSHIP AND CONTACT HOURS

(1) Instructional Programs	Average Daily Membership				School Hours Per Year				(8) Total Student Contact Hours
	(2) Female	(3) Male	(4) Total	X	(5) Number Days	(6) Hours Per Day	(7) Total Hours/Yr.	=	
1.									
2.									
3.									
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20.									
TOTAL									

APPENDIX C continued

Secondary Vocational Instructional Program Data

C/E FORM II-2. STUDENT ENROLLMENT, DROPOUT AND COMPLETION DATA

(1) Instructional Programs	(2) ADM Enrollment		(3) Enrollment Gain		(4) Total Enrollment	(5) Enrollment Losses Other Than Dropout	(6) Dropouts	Completions		
	Male	Female	Male	Female				(7) Prepared For Further Training	(8) Employable	(9) Total
1.										
2.										
3.										
4.										
5.										
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20.										
TOTAL										

Secondary Vocational Instructional Program Data

C/E FORM II-3. SPECIAL STUDENT ENROLLMENT, COMPLETION, DROPOUT, AND WORKSTUDY DATA

(1) Instructional Programs	(2) ADM Enrollment			(3) Enrollment Gain			(4) Total Enrollment	(5) Enrollment Losses Other Than Dropout	(6) Dropouts	Completions									(10) Total Work Study
										(7) Prepared			(8) Employable			(9) Total			
	Dad	Gftd	Hdc	Dad	Gftd	Hdc				Dad	Gftd	Hdc	Dad	Gftd	Hdc	Dad	Gftd	Hdc	
1.																			
2.																			
3.																			
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18.																			
19.																			
20.																			
TOTAL																			

APPENDIX C continued

Enter totals for each column

C/E FORM II-4

(1) Instructional Program	(2) Special Students			(3) Enrolled In Special Courses	(4) Does Not Need Special Courses	(5) Not Enrolled in Special Courses	(6) Received Services		
	Dad	Gftd	Hdc				C & G	Career	Other

(For Purposes Of "Privacy Act" Return This Portion To C/E Study Leader)

Secondary Vocational Instructional Program Data

C/E FORM II-4. COUNSELOR PROGRAM ENROLLMENT ANALYSIS* Program: ____________________

(1) Student Names	(2) Special Students			(3) Enrolled In Special Courses	(4) Does Not Need Special Courses	(5) Not Enrolled In Special Courses	(6) Received Services		
	Dad	Gftd	Hdc				C & G	Career Dev.	Other
1.									
2.									
3.									
4.									
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TOTAL									

*Check the status of the above students: special student; i.e., disadvantaged, gifted, handicapped; enrolled in such courses as reading improvement, etc. Place a check (√) in all columns that apply.

APPENDIX C continued

Secondary Vocational Instructional Program Data

C/E FORM II-5. SPECIAL STUDENTS ENROLLED IN VOCATIONAL PROGRAMS AND RELATED COURSES

(1) Instructional Programs	(2) Special Students			(3) Enrolled In Special Courses	(4) Does Not Need Special Courses	(5) Not Enrolled In Special Courses	(6) Received Services		
	Dad	Gftd	Hdc				C & G	Career Dev.	Other
1.									
2.									
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20.									
TOTAL									

APPENDIX C continued

Secondary Vocational Instructional Program Data

C/E FORM II.6. STUDENT PARTICIPATION IN YOUTH ORGANIZATIONS

(1) Instructional Programs	(2) Youth Organization	(3) Number of Participants
1.		
2.		
3.		
4.		
5.		
6.		
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TOTAL	▨	

APPENDIX C continued

C/E FORM III

Code No. ______

Students' Follow-up Program Rating Scale

This questionnaire is one portion of an evaluation of vocational education programs. Information you can provide will serve as an important basis for decisions regarding local school programs.

The information on this form will be used as a program class profile. Please note that your name does not appear on the questionnaire. This confidential data will not be reported as information on specific students, employers, or teachers. The code number at the top of the page will be used to record person returning the questionnaire.

INSTRUCTIONS: Please mark reponses to the following questions or statements. When you have completed the questionnaire, return it in the enclosed postage paid envelope.

THANK YOU FOR YOUR TIME AND THOUGHTS.

1. Were you enrolled in a vocational education program while in school?

Yes . . . ☐ No . . . ☐

2. What type of vocational program:

Agriculture . . . . ☐
Distributive Education . . . . ☐
Business . . . . ☐
Health . . . . ☐
Home Economics . . . . ☐
Trade & Industry . . . . ☐

3. Has your address changed since leaving school?

Yes . . . ☐ No . . . ☐

3a. If you answered "yes" above, where did you move?

To a place in the same county . . . . ☐
To a different county (same state) . . . . . . ☐
To a different state . . . . ☐

4. Since you left school, did you seek full-time employment? (35 or more hours per week)

Yes . . . ☐ No . . . ☐

5. What is your present employment status?

Employed: full-time (35 or more hours per week) . . . . ☐
Employed: part-time (less than 35 hours per week) . . . . ☐
Not Employed: looking for work . . . . ☐
Not Employed: not looking for work . . . . . ☐
Attending school . . . . ☐
Married or getting married . . . . ☐
Military . . . . ☐
Other (explain) ______________________

6. Have you had a full-time job since leaving high school?

Yes . . . ☐ No . . . ☐

Answer these questions if you are working full-time.

7. How long after leaving high school did you begin your first full-time job?

No waiting period . . . . ☐
Less than 4 weeks . . . . ☐
4 to 8 weeks . . . . ☐
8 to 12 weeks . . . . ☐
12 to 15 weeks . . . . ☐
15 to 18 weeks . . . . ☐
18 to 24 weeks . . . . ☐

8. Is your present job related to the vocational training you received?

Same occupation . . . . ☐
Highly related . . . . ☐
Slightly related . . . . ☐
Totally unrelated . . . . ☐

9. Did your first job require that you take a licensed examination?

Yes . . . ☐ No . . . ☐

10. Did you pass the examination?

Yes . . . ☐ No . . . ☐

If you are going to school, answer these questions.

11. Are you enrolled in advanced study?

Yes . . . ☐ No . . . ☐

12. What is the relationship of your advanced study program to your high school vocational program?

New program is in the same occupation . . . ☐
New program is in a related occupation . . ☐
New program is in an entirely different occupation . . . . ☐

APPENDIX C continued

Rate the following items as they state your personal feelings or experiences. Check the blank according to whether you agree or disagree with the statement.

	Agree (3)	Don't Know (2)	Disagree (1)
13. I'm satisfied with the vocational training I received in high school as meeting my goals.	☐	☐	☐
14. I would recommend this vocational program to others.	☐	☐	☐
15. The vocational youth organization activities met my needs and interests.	☐	☐	☐
16. I feel that the career counseling and guidance services I received at school were adequate.	☐	☐	☐
17. The career information that I received during the school was influential in my career choice.	☐	☐	☐
Rate if working.			
18. I was adequately prepared for my present job by my vocational program.	☐	☐	☐
19. I was adequately trained to get along with others at work by my vocational program.	☐	☐	☐
20. I am satisfied with my present job.	☐	☐	☐
Rate if going to school.			
21. The vocational program that I completed was influential in my decision to take advanced studies.	☐	☐	☐
22. The vocational program that I completed prepared me to pursue advanced study.	☐	☐	☐

APPENDIX C continued

Students' Follow-up Program Rating Scale

C/E FORM III-1. TALLY AND SUMMATION SHEET FOR STUDENT FOLLOW-UP

INSTRUCTIONAL PROGRAM ____________________

(1) Question #3. # of No Boxes Checked	(2) Question #3a. # Moved Out of County or State	(3) Question #4. # of Yes Boxes Checked	(4) Question #5. # Employed Fulltime	(5) Question #5. # Attending School	(6) Question #6. # of Yes Boxes Checked	(7) Question #7. Total Boxes Checked 15 Wks. or Less	(8) Question #7. Total Boxes Checked 15 Wks. or more	(9) Question #8. # Checked Same Occupation	(10) Question #8. # of Boxes Checked Highly or Slightly Related	(11) Question #9. # of Yes Boxes Checked	(12) Question #10. # of Yes Boxes Checked	(13) Question #11. # of Yes Boxes Checked
Tally												
Total												

(14) Question #12. # in Same Occupation	(15) Question #12. # of Boxes Checked Related Occupation	(16) Question #13. # of Agreed Boxes Checked	(17) Question #14. # of Agreed Boxes Checked	(18) Question #15. # of Agreed Boxes Checked	(19) Question #16. # of Agreed Boxes Checked	(20) Question #17. # of Agreed Boxes Checked	(21) Question #18. # of Agreed Boxes Checked	(22) Question #19. # of Agreed Boxes Checked	(23) Question #20. # of Agreed Boxes Checked	(24) Question #21. # of Agreed Boxes Checked	(25) Question #22. # of Agreed Boxes Checked
Tally											
Total											

APPENDIX C continued

C/E FORM IV

Code No. ______

Employers' Opinion on Vocational Training of Employees

Dear Employer:

This questionnaire was developed for you to provide information on the vocational training of an employee in your firm. Your response will serve as a basis for decisions regarding local vocational program development and operation. This confidential data will not be reported as information on specific students, employers, or teachers.

Please provide the appropriate information about the designated employee. When you have completed the questionnaire, return it in the enclosed postage paid envelope.

* *

____________________ is an employee in your firm.

1. What is the title of the position he/she holds within the firm? (example: secretary, machine operator, cashier, etc.)

   Job title: ______________________________

2. When hiring the person, did you consider his/her vocational training at the high school level as critical in your decision?

   Yes . . . . . . ☐ No . . . . . . ☐ Undecided . . . . . . ☐

3. Please rate the person's occupational skills at the time the person was employed.

   No skill and knowledge . . . . ☐
   Limited skill and knowledge . . . . ☐
   Fair skill and knowledge . . . . ☐
   Exceptional skill and knowledge . . . . ☐

4. Do you think that the employee's skill or knowledge attained through the vocational training program has allowed the employee to advance in his/her job?

   Yes . . . . . . ☐ No . . . . . . ☐ Undecided . . . . . . ☐

5. Do you look to the vocational education program as a good source of trained personnel?

   Yes . . . . . . ☐ No . . . . . . ☐ Undecided . . . . . . ☐

6. Please rate the employee in the following factors: (check each of the items on the adjacent scale)

Factors					
A) Cooperativeness with supervisor	Poor	Fair	Good	Very Good	Excellent
B) Cooperativeness with other employees	Poor	Fair	Good	Very Good	Excellent
C) Interest in the job	Poor	Fair	Good	Very Good	Excellent
D) Attendance and punctuality	Poor	Fair	Good	Very Good	Excellent
E) Productivity	Poor	Fair	Good	Very Good	Excellent

Employers' Opinion on Vocational Training of Employees

C/E FORM IV-1. TALLY AND SUMMATION SHEET FOR EMPLOYER FOLLOW-UP

(1) Instructional Programs	(2) Question #2 on Employer Follow-Up # of Yes Boxes Checked Indicating Vocational Preparation Critical		(3) Question #3 on Employer Follow-Up # of Employers Ranking Employed as "Fairly Skilled" or Above		(4) Question #4 on Employer Follow-Up # of Yes Boxes Checked Indicating Advancement Related To Vocational Program		(5) Question #5 on Employer Follow-Up # of Yes Boxes Checked Indicating Employers Value Vocational Programs		(6) Question #6 on Employer Follow-Up # of Employers Rating Employees on 3 out of the 5 Maturity Factors at Good or Above	
	Tally	Total	Tally	Total	Tally	Total	Tally	Total	Tally	Total
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APPENDIX C continued

Vocational Instructional Program Cost Data

☐ Budgeted

☐ Actual

C/E FORM V-1.
SALARIES FOR INSTRUCTIONAL PROGRAM STAFF AND FTE DATA*

(1) Instructional Program	(2) Instructional Salary		(3) FTE		(4) Average Instructional Salary
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
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16.					
17.					
18.					
19.					
20.					
TOTAL		÷		=	

*Reimburseable salary for all vocational instructional staff.

APPENDIX C continued

Vocational Instructional Program Cost Data

☐ Budgeted

☐ Actual

C/E FORM V-2. FRINGE BENEFITS FOR TEACHING STAFF*

(1) Instructional Programs	(2) Group Health Insurance/Program	(3) Compensation and Relief/Program	(4) Other Benefits/Program	(5) Total
1.				
2.				
3.				
4.				
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7.				
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16.				
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19.				
20.				
TOTAL				

*Retirement and social security benefits paid by state are not included in local costs.

Vocational Instructional Program Cost Data

☐ Budgeted

☐ Actual

C/E FORM V-3. TRAVEL COST ASSIGNED TO PROGRAMS

(1) Instructional Programs	(2) Instructional Personnel	(3) Instructional Activities	(4) Total Cost
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
TOTAL			

APPENDIX C continued

Vocational Instructional Program Cost Data

☐ Budgeted

☐ Actual

C/E FORM V-4. COST OF INSTRUCTIONAL SUPPLIES AND MATERIALS

(1) Instructional Programs	(2) Consumable Supplies	(3) Text Books and References	(4) Other Supplies	(5) Total Cost
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
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11.				
12.				
13.				
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16.				
17.				
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19.				
20.				
TOTAL				

APPENDIX C continued

Vocational Instructional Program Cost Data

☐ Budgeted
☐ Actual

C/E FORM V-5. COST OF EQUIPMENT USED BY INSTRUCTIONAL PROGRAM

(1) Equipment	Equipment Purchased for Instructional Program								(10) Percent of Time Used	(11) Total Annual Cost for Equipment*
	Previous Purchases				Purchased This Year					
	(2) Original Cost	(3) Life Span	(4) Amt. of Previous Depreciation	(5) Annual Depreciated Cost	(6) Original Cost	(7) Life Span	(8) Non-Depreciated Supplies	(9) Annual Depreciated Cost		
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20.										
TOTAL										

*Line entry for Column 11 is the product of either Column 5 times Column 10 or Column 9 times Column 10.

Vocational Instructional Program Cost Data

☐ Budgeted
☐ Actual

C/E FORM V-6. COST OF FURNITURE USED IN INSTRUCTIONAL PROGRAM

(1) Furniture	Furniture Purchased for Instructional Program								(10) Percent of Time Used	(11) Total Annual Cost for Furniture*
	Previous Purchases				Purchased This Year					
	(2) Original Cost	(3) Life Span	(4) Amt. of Previous Depreciation	(5) Annual Depreciated Cost	(6) Original Cost	(7) Life Span	(8) Non-Depreciated Supplies	(9) Annual Depreciated Cost		
1.										
2.										
3.										
4.										
5.										
6.										
7.										
8.										
9.										
10.										
12.										
13.										
14.										
15.										
16.										
17.										
18.										
19.										
20.										
TOTAL										

*Line entry for Column 11 is the product of either Column 5 times Column 10 or Column 9 times Column 10.

Vocational Instructional Program Cost Data

☐ Budgeted

☐ Actual

C/E FORM V-7. TOTAL COST OF EQUIPMENT AND FURNITURE USED BY INSTRUCTIONAL PROGRAMS

(1) Instructional Programs	Equipment			Furniture			(8) Total Annual Cost - Sum of Columns 4 & 7
	(2) Total Previous Depreciated Cost (V-5, Col. 5)	(3) Total New Depreciated Cost (V-5, Col. 9)	(4) Total Depreciated Cost for Equipment (V-5, Col. 11)	(5) Total Previous Depreciated Cost (V-6, Col. 5)	(6) Total New Depreciated Cost (V-6, Col. 9)	(7) Total Depreciated Cost for Furniture (V-6, Col. 11)	
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
13.							
14.							
15.							
16.							
17.							
18.							
19.							
20.							
TOTAL							

Vocational Instructional Program Cost Data

C/E FORM V-8. BUILDING SPACE, USE, AND TIME/FLOOR DATA FOR INSTRUCTIONAL PROGRAM

(1) Instructional Programs	(2) Sq. Ft. Per Program	+	(3) Prorated Other Space*	=	(4) Total Sq. Ft. Per Program	X	(5) Number of Voc. Hrs. Used Per Year	=	(6) Time/Floor Unit For Instructional Program	÷	(7) Time/Floor Unit For All Vocational Programs**	=	(8) Percent Of Time/Floor
1.													
2.													
3.													
4.													
5.													
6.													
7.													
8.													
9.													
10.													
11.													
12.													
13.													
14.													
15.													
16.													
17.													
18.													
19.													
20.													
TOTAL													

*Prorated other space = halls, restrooms, office space not connected to program. Subtract Form V-8, Column 2 total from Form I-2, Column 2, Line I.

**Time/floor unit for all vocational programs can be obtained from Form I-2, Column 4, Line I.

Vocational Instructional Program Cost Data

☐ Budgeted
☐ Actual

C/E FORM V-9. BUILDING USE COST DATA

(1) Instructional Programs	(2) Instructional Program Sq. Ft. Space	÷	(3) Total Building Sq. Ft. Space Housing Inst. Program	=	(4) Percent Total Space	×	(5) Original Cost Of Building	=	(6) Cost for Voc. Space	÷	(7) Life Span	=	(8) Depreciated Annual Cost
1.													
2.													
3.													
4.													
5.													
6.													
7.													
8.													
9.													
10.													
11.													
12.													
13.													
14.													
15.													
16.													
17.													
18.													
19.													
20.													

Vocational Instructional Program Cost Data

☐ Budgeted

C/E FORM V-10. OTHER DIRECT COST ☐ Actual

(for example: secretary, teacher aids, contracted services, etc.)

(1) Instructional Programs	(2) Costs
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12.	
13.	
14.	
15.	
16.	
17.	
18.	
19.	
20.	
TOTAL	

Vocational Instructional Program Cost Data

☐ Budgeted

☐ Actual

C/E FORM V-11. SUPPORTING SERVICES COST PRORATED TO INSTRUCTIONAL PROGRAM: ____________

(1) Line Item	(2) Costs	(3) Corporation Proration Basis*	(4) Prorated Costs Per Unit	(5) # of Instructional Program Units**	(6) Total Proration Cost/ Instructional Program
20000 Support Services	▨	▨	▨	▨	▨
21000 Student Services		ADM:		ADM:	
22000 Instruction Staff		FTE:		FTE:	
23000 General Administration		FTE:		FTE:	
24000 School Administration		ADM:		ADM:	
25000 Business Services	▨	▨	▨	▨	▨
25200 Fiscal Services		FTE:		FTE:	
25300 Facilities Acquis. & Const.		FTE:		FTE:	
25400 Oper. & Maint. of Plant		T/F:		T/F:	
25500 Student Transportation		ADM:		ADM:	
25600 Food Services		ADM:		ADM:	
25700 Internal Services		FTE:		FTE:	
26000 Central Services		FTE:		FTE:	
27000 Other Support Services		FTE:		FTE:	
TOTAL		▨	▨	▨	

*Data for ADM, FTE and T/F can be obtained from Form I-1 and I-2.

**Data for Instructional ADM can be obtained from Form II-1; instructional FTE from Form V-1; and Instructional T/F from Form V-8.

Vocational Instructional Program Cost Data

☐ Budgeted

☐ Actual

C/E FORM V-12. PRORATED SUPPORTING SERVICES COST PER INSTRUCTIONAL PROGRAM

(1) Instructional Programs	(2) Total Proration Cost Per Instructional Program*
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12.	
13.	
14.	
15.	
16.	
17.	
18.	
19.	
20.	
TOTAL	

*Data can be obtained from individual program sheets Form V-11.

Vocational Instructional Program Cost Data

☐ Budgeted
☐ Actual

C/E FORM V-13. SUMMUATION SHEET FOR INSTRUCTIONAL PROGRAM COST

(1) Instructional Programs	(2) Salary Cost (Form V-1 Col. 2)	(3) Fringe Benefit Cost (Form V-2 Col. 5)	(4) Travel Cost (Form V-3 Col. 4)	(5) Supplies & Materials Cost (Form V-4 Col. 5)	(6) Equipment & Furniture Cost (Form V-7 Col. 8)	(7) Building Use Cost (Form V-9 Col. 8)	(8) Other Direct Costs (Form V-10 Col. 2)	(9) Prorated Supporting Service Cost (Form V-12 Col. 2)	(10) Total Instructional Program Cost
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									
11.									
12.									
13.									
14.									
15.									
16.									
17.									
18.									
19.									
20.									
TOTAL									

APPENDIX D

APPENDIX D

Program Objective and Output Data Unit

Objectives	DATA UNIT		
	Basic Unit	Factor Unit	Target Goal
1. Aid students enrolled in vocational education to successfully complete a secondary occupational program.			
1-a. ___percent of the student population will be enrolled in the secondary vocational program during the 19__-19__ school year.	Total student population ☐	Total of all students enrolled in program ☐	$\frac{\text{VE Enrolled}}{\text{Total Population}} \times 100 =$ ___%
1-b. ___percent of the students will complete the program requirements.	Total of all students enrolled in program ☐	# of student completions ☐	$\frac{\text{Completions}}{\text{Enrolled}} \times 100 =$ ___%
1-c. ___percent of the students completions will have on-the-job occupational experience.	# of student completions ☐	# of students with on-the-job experience (coop) ☐	$\frac{\text{\# of Coop}}{\text{\# of Completions}} \times 100 =$ ___%
1-d. ___percent less dropout rate will occur in the vocational program than the total dropout rate for the school.	$\frac{\text{\# of dropouts for total school}}{\text{\# of students in whole school}}$ ☐ X 100 = %	$\frac{\text{\# of dropouts in program}}{\text{\# of students in whole school}}$ ☐ X 100 = %	% School Dropouts - % Program Dropouts
1-e. ___percent of student completions will rate their program as satisfactorily meeting their educational goals.	# of student completions ☐	# of students rating program satisfactory ☐	$\frac{\text{Satisfaction}}{\text{Completions}}$ [illegible] 100 = ___%

APPENDIX D (continued)

Program Objective and Output Data Unit

Objectives	DATA UNIT		
	Basic Unit	Factor Unit	Target Goal
1-f. ___percent of the student completions will indicate they would recommend their vocational program to other students.	# of student completions ☐	# of students recommending to others ☐	$\frac{\text{Recommending}}{\text{Completions}} \times 100 =$ ___%

APPENDIX D (continued)

Program Objective and Output Data Unit

Objectives	DATA UNIT		
	Basic Unit	Factor Unit	Target Goal
2. Assist special student groups to successfully achieve in a secondary vocational program.			
2-a. ___percent of the persons identified as special education students will be enrolled in the vocational program (mainstream).	# of special education students in school ☐	# of special education students enrolled in vocational program ☐	$\frac{\text{\# Special Ed in VE}}{\text{\# of Special Ed in School}} \times 100$ = ___%
2-b. ___percent of the disadvantaged students will be enrolled in the vocational program.	# of disadvantaged students enrolled in school ☐	# of disadvantaged enrolled in vocational program ☐	$\frac{\text{\# Disadvantaged}}{\text{\# Enrolled}} \times 100 =$ ___%
2-c. ___disadvantaged persons (economically and/or educationally) will complete the secondary vocational program.	Actual # of disadvantaged completing program ☐	Actual # of disadvantaged completing program ☐	Actual Number
2-d. ___disadvantaged students (economically and/or educationally) will participate in work-study programs.	Actual # of disadvantaged in work-study ☐	Actual # of disadvantaged in work-study ☐	Actual Number
2-e. ___handicapped persons (physical and/or mental) will successfully complete the secondary vocational program.	Actual # of handicapped completions ☐	Actual # of handicapped completions ☐	Actual Number
2-f. ___exceptional youth will complete the secondary vocational program.	Actual # of exceptional completions ☐	Actual # of exceptional completions ☐	Actual Number

APPENDIX D (continued)

Program Objective and Output Data Unit

		DATA UNIT		
	Objectives	Basic Unit	Factor Unit	Target Goal
2-g.	___ percent of the students enrolled will represent the sex minority in those programs traditionally considered sex-stereotyped.	Total of all students who are enrolled in program ☐	# sex minority enrolled ☐	$\frac{\text{\# Minority}}{\text{\# Enrolled}} \times 100 = \_\_\_\%$
2-h.	___ percent of the students classified in special student groups who can benefit from a related or enabling skills course will be enrolled in such courses.	# of special students in program ☐	# of special students enrolled in related courses ☐	$\frac{\text{\# Enrolled in Related}}{\text{\# in Vocational Program}} \times 100$ $= \_\_\_\%$
2-i.	___ percent of the students enrolled in related or enabling skills courses will attain minimum competencies in order to benefit from vocational or preparatory programs.	# of students enrolled in related courses ☐	# attaining minimum competencies in enabling skills ☐	$\frac{\text{\# Attaining}}{\text{\# Enrolled}} \times 100 = \_\_\_\%$
2-j.	___ percent of the students classified in special student groups will rate their vocational program as satisfactorily meeting their educational goals.	# of special student completions ☐	# of special students rating program satisfactory ☐	$\frac{\text{Satisfaction}}{\text{Completions}} \times 100 = \_\_\_\%$
2-k.	___ percent of the special students group completions will indicate they would recommend their vocational program to other students.	# of special student completions ☐	# of special students recommending to others ☐	$\frac{\text{\# Recommending}}{\text{\# Completions}} \times 100 = \_\_\_\%$

Program Objective and Output Data Unit

Objectives	DATA UNIT		
	Basic Unit	Factor Unit	Target Goal
3. Provide vocational education for secondary school youth in accordance with their occupational preparation.			
3-a. ___ percent of the students available for and having sought employment will be employed full-time in less than fifteen weeks after graduation. (Consider military and apprenticeships as employed.)	# of graduates available ☐	# of students employed ☐	$\frac{\#\text{ Employed}}{\#\text{ Available}}$ X 100 = ___%
3-b. ___ percent of the graduates available for and having sought employment in their specialization will be employed in their specialization in less than fifteen weeks after graduation. (Include military and apprenticeships if in the area of specialization.)	# of graduates available ☐	# of students employed in speciality ☐	$\frac{\#\text{ Employed (speciality)}}{\#\text{ Available}}$ = ___%
3-c. ___ percent of the graduates available for employment will be employed in their specialization or in a position they considered related to their area in less than fifteen weeks after graduation. (Include military and apprenticeships if in specialization or related area.)	# of graduates available ☐	# of students employed in speciality and/or related area ☐	$\frac{\#\text{ Employed}}{\#\text{ Available}}$ X 100 = ___%

APPENDIX D (continued)

Program Objective and Output Data Unit

Objectives	DATA UNIT		
	Basic Unit	Factor Unit	Target Goal
3-d. ___ percent of the enrollees who terminate schooling before completing program requirements will find their first full-time job in the occupation for which they were being trained or a related area. (Include military and apprenticeships if in specialization or related area.)	# of students who didn't complete who are available for full-time work ☐	# of students who didn't finish program that are employed in area of training ☐	$\frac{\#\text{ Employed}}{\#\text{ Available}} \times 100 = \_\_\_\%$
3-e. ___ percent of the graduates of any licensed occupation program (who apply and take) will pass the appropriate examination.	# of students who apply and take ☐	# students passing exam ☐	$\frac{\#\text{ Passing exam}}{\#\text{ Taking exam}} \times 100 = \_\_\_\%$
3-f. ___ percent of the students responding on a follow-up study will indicate they are satisfied with their job.	# of students employed ☐	# of employed that are satisfied with job ☐	$\frac{\#\text{ Satisfied}}{\#\text{ Employed}} \times 100 = \_\_\_\%$
3-g. ___ percent of the students employed six (6) months after graduation will indicate that their skill preparation was adequate for their present job.	# of students employed ☐	# indicating adequate preparation ☐	$\frac{\#\text{ Adequate}}{\#\text{ Employed}} \times 100 = \_\_\_\%$
3-h. ___ percent of the graduates will indicate they were adequately prepared to work with supervisors, co-workers and subordinates.	# of students employed ☐	# of employed that were adequately prepared ☐	$\frac{\#\text{ Prepared}}{\#\text{ Employed}} \times 100 = \_\_\_\%$

APPENDIX D (continued)

Program Objective and Output Data Unit

Objectives	DATA UNIT		
	Basic Unit	Factor Unit	Target Goal
4. Provide leadership development activities for students enrolled in vocational programs through a youth organization functioning as an integral part of the vocational instruction.			
4-a. ___ percent of the students enrolled in the vocational program will have taken an active part in (youth organization, i.e., VICA, FFA, FHA, etc.) activities for the school year.	# of students enrolled in (appropriate) program ☐	# of students participating in youth organization ☐	$\frac{\#\ \text{Participating}}{\#\ \text{Enrolled}} \times 100 =$ ___%
4-b. ___ percent of youth organization participants will rate the activities as meeting their needs and interests.	# of students participating in youth organization ☐	# rating as meeting needs ☐	$\frac{\#\ \text{Rating}\ \_\_\_\_\_}{\#\ \text{Participating}} \times 100 =$ ___%

APPENDIX D (continued)

Program Objective and Output Data Unit

	DATA UNIT		
Objectives	Basic Unit	Factor Unit	Target Goal
5. Provide guidance and counseling services (career development) information appropriate to continued education or employment for students enrolled in vocational programs.			
5-a. ___ vocational students will receive career counseling and guidance services.		Actual # of students receiving services ☐	Actual Number
5-b. ___ students will receive career development information during the school year 19__-19__.		Actual # of students receiving information ☐	Actual Number
5-c. ___ percent of the students will indicate career guidance and counseling services as adequate after completion of their vocational program.	# of students completion ☐	# of students indicating adequate services ☐	$\frac{\#\text{ Adequate}}{\#\text{ Completion}} \times 100 =$ ___%
5-d. ___ percent of the students receiving exploratory career information will rate the experience as having influence on their career choice.	# of students enrolled ☐	# rating information had influence ☐	$\frac{\#\text{ Rating}}{\#\text{ Enrolled}} \times 100 =$ ___%

APPENDIX D (continued)

Program Objective and Output Data Unit

Objectives	DATA UNIT		
	Basic Unit	Factor Unit	Target Goal
6. Provide vocational programs to fulfill the requirement of the labor markets and the employment community manpower needs.			
6-a. ___ percent of the student completions will be working in the employment community serviced by the school corporation.	# of student completions ☐	# of completions working in community ☐	$\frac{\text{\# Working in comm.}}{\text{\# Completions}} \times 100 =$ ___%
6-b. ___ percent of the student completions will seek employment external to the employment community in which they were trained.	# of student completions ☐	# working and seeking external employment ☐	$\frac{\text{\# External}}{\text{\# Completions}} \times 100 =$ ___%
6-c. ___ percent of all students will be enrolled in the vocational program that is considered to have high employment community and manpower occupational needs. (Projected)	# enrolled in school ☐	# enrolled high need ☐	$\frac{\text{\# in high need}}{\text{\# enrolled in all V.E. programs}} \times 100 =$ ___%
6-d. ___ employers will value the vocational program as a source of trained manpower.		# employers that value vocational program as source ☐	Actual Number
6-e. ___ employers will indicate that the employees' vocational preparation was critical in the employment decision.		# employers indicating vocational preparation critical ☐	Actual Number

APPENDIX D (continued)

Program Objective and Output Data Unit

Objectives	DATA UNIT		
	Basic Unit	Factor Unit	Target Goal
6-f. ___employers will rank the employees' skill and knowledge level at a minimum of fairly skilled or above.		# employers ranking employees as "fairly skilled" or above ☐	Actual Number
6-g. ___employers will indicate job advancement is related to training received in the vocational education programs.		# employers indicating advancement related to vocational program ☐	Actual Number
6-h. ___employers will rate the employees on the job maturity factors at a minimum mean of good or above.		# employers rating employees maturity factors at "good" or above ☐	Actual Number

APPENDIX D (continued)

Program Objective and Output Data Unit

Objectives	DATA UNIT Basic Unit	 Factor Unit	 Target Goal
7. Encourage vocational graduates to continue their education after completion of their secondary program.			
7-a. ___percent of the students who complete the vocational program will be enrolled in advanced study programs.	# of completions ☐	# enrolled in advanced study ☐	$\frac{\text{\# advanced study}}{\text{\# of completions}} \times 100 =$ ______%
7-b. ___percent of the students enrolled in advanced study programs will be in the same program speciality as their secondary vocational program.	# of completions ☐	# enrolled in area of speciality ☐	$\frac{\text{\# enrolled (speciality)}}{\text{\# of completions}} \times 100 =$ ______%
7-c. ___percent of the students enrolled in advanced study programs will be in their specialization or programs which they considered related to their secondary vocational program.	# of completions ☐	# enrolled in area of speciality and/or related area ☐	$\frac{\text{\# enrolled (speciality and related)}}{\text{\# completions}} \times 100 =$ ______%
7-d. ___percent of the students enrolled in advanced study programs will rate their secondary vocational program as instrumental in their decision to continue their education.	# enrolled in advanced study ☐	# of students rating secondary program instrumental ☐	$\frac{\text{\# rating}}{\text{\# enrolled}} \times 100 =$ ______%
7-e. ___percent of the students enrolled in advanced study programs will indicate their vocational program prepared them for their pursuit of advanced study.	# enrolled in advanced study ☐	# of students enrolled indicating prepared ☐	$\frac{\text{\# prepared}}{\text{\# enrolled}} \times 100 =$ ______%

APPENDIX E

APPENDIX E

PROGRAM OBJECTIVE AND OUTPUT ANALYSIS FORM

	Objectives	Target Goal	Output	Effectiveness Score Output / Target Goal X 100 = __%	Weighted Value Weight		Adjusted Score
1:	*Aid students enrolled in vocational education to successfully complete a secondary occupational program.*						
1-a.	___ students will graduate from the secondary vocational program during the 19__ - 19__ school year.	_____	_____	_____ X 100 = _____	X_____	=	_____
1-b.	___ percent of the students will complete the program requirements.	_____	_____	_____ X 100 = _____	X_____	=	_____
1-c.	___ percent of student completions will have on-the-job occupational experience.	_____	_____	_____ X 100 = _____	X_____	=	_____
1-d.	___ percent of the students will not dropout of the vocational programs during the school year 19__ - 19__.	_____	_____	_____ X 100 = _____	X_____	=	_____
1-e.	___ percent of student completions will rate their program as satisfactorily meeting their educational goals.	_____	_____	_____ X 100 = _____	X_____	=	_____
1-f.	___ percent of student completions would indicate their vocational program was a wise choice.	_____	_____	_____ X 100 = _____	X_____	=	_____
	____________________ ____________________	_____	_____	_____ X 100 = _____	X_____	=	_____
	____________________ ____________________	_____	_____	_____ X 100 = _____	X_____	=	_____

APPENDIX E (continued)

Objectives		Target Goal	Output	Effectiveness Score Output / Target Goal X 100 = ___%	Weighted Value Weight		Adjusted Score
2.	*Assist special student groups to successfully achieve in a secondary vocational program.*						
2-a.	___ percent of the persons identified as special education students will be enrolled in the vocational program (mainstream).	___	___	___ X 100 = ___	X___	=	___
2-b.	___ percent of the disadvantaged students will be enrolled in the vocational program.	___	___	___ X 100 = ___	X___	=	___
2-c.	___ disadvantaged persons (economically and/or educationally) will complete the secondary vocational program.	___	___	___ X 100 = ___	X___	=	___
2-d.	___ disadvantaged students (economically and/or educationally) will participate in work-study programs.	___	___	___ X 100 = ___	X___	=	___
2-e.	___ handicapped persons (physical and/or mental) will successfully complete the secondary vocational program.	___	___	___ X 100 = ___	X___	=	___
2-f.	___ exceptional youth will complete the secondary vocational program.	___	___	___ X 100 = ___	X___	=	___
2-g.	___ percent of the students enrolled will represent the sex minority in those programs traditionally considered sex-stereotyped.	___	___	___ X 100 = ___	X___	=	___

APPENDIX E (continued)

	Objectives	Target Goal	Output	Effectiveness Score Output / Target Goal X 100 = __%	Weighted Value Weight	Adjusted Score
2-h.	___ percent of the students classified in special student groups who can benefit from a related or enabling skills course will be enrolled in such courses.	_____	_____	_____ X 100 = _____	X_____ =	_____
2-i.	___ percent of the students enrolled in related or enabling skills courses will attain minimum competencies in order to benefit from vocational or preparatory programs.	_____	_____	_____ X 100 = _____	X_____ =	_____
2-j.	___ percent of the students classified in special student groups will rate their vocational program as satisfactorily meeting their education goals.	_____	_____	_____ X 100 = _____	X_____ =	_____
2-k.	___ percent of the special student group completions will indicate they would recommend their vocational program to other students.	_____	_____	_____ X 100 = _____	X_____ =	_____
	______________________________					
	______________________________	_____	_____	_____ X 100 = _____	X_____ =	_____
	______________________________					
	______________________________	_____	_____	_____ X 100 = _____	X_____ =	_____

APPENDIX E (continued)

	Objectives	Target Goal	Output	Effectiveness Score Output / Target Goal X 100 = __%	Weighted Value Weight	Weighted Value Adjusted Score
3.	*Provide vocational education for secondary school youth in accordance with their occupational preparation.*					
3-a.	___ percent of the students available for and having sought employment will be employed full-time in less than fifteen weeks after graduation. (Consider military and apprenticeships as employed.)	_____	_____	_____ X 100 = _____	X_____	= _____
3-b.	___ percent of the graduates available for and having sought employment in their specialization will be employed in their specialization in less than fifteen weeks after graduation. (Include military and apprenticeships if in the area of specialization.)	_____	_____	_____ X 100 = _____	X_____	= _____
3-c.	___ percent of the graduates available for employment will be employed in their specialization or in a position they considered related to their area in less than fifteen weeks after graduation. (Include military and apprenticeships if in specialization or related area.)	_____	_____	_____ X 100 = _____	X_____	= _____
3-d.	___ percent of the enrollees who terminate schooling before completing program requirements will find their first full-time job in the occupation for which they were being trained or a related area. (Include military and apprenticeships if in specialization or related area.)	_____	_____	_____ X 100 = _____	X_____	= _____

APPENDIX E (continued)

	Objectives	Target Goal	Output	Effectiveness Score Output / Target Goal X 100 = ___%	Weighted Value Weight		Adjusted Score
3-e.	___ percent of the graduates of any licensed occupation program (who apply and take) will pass the appropriate examination.	_____	_____	_____ X 100 = _____	X_____	=	_____
3-f.	___ percent of the students responding on a follow-up study will indicate they are satisfied with their job.	_____	_____	_____ X 100 = _____	X_____	=	_____
3-g.	___ percent of the students employed six (6) months after graduation will indicate that their skill preparation was adequate for their present job.	_____	_____	_____ X 100 = _____	X_____	=	_____
3-h.	___ percent of the graduates will indicate they were adequately prepared to work with supervisors, co-workers and subordinates.	_____	_____	_____ X 100 = _____	X_____	=	_____
	______________________________ ______________________________	_____	_____	_____ X 100 = _____	X_____	=	_____
	______________________________ ______________________________	_____	_____	_____ X 100 = _____	X_____	=	_____

APPENDIX E (continued)

Objectives	Target Goal	Output	Effectiveness Score Output / Target Goal X 100 = __%	Weighted Value Weight	Adjusted Score
4. *Provide leadership development activities for students enrolled in vocational programs through a youth organization functioning as an integral part of the vocational instruction.*					
4-a. ___ percent of the students enrolled in the vocational program will have taken an active part in (youth organization, i.e., VICA, FFA, FHA, etc.) activities for the school year.	_____	_____	_____ X 100 = _____	X_____ =	_____
4-b. ___ percent of youth organization participants will rate the activities as meeting their needs and interests.	_____	_____	_____ X 100 = _____	X_____ =	_____
______________________________ ______________________________	_____	_____	_____ X 100 = _____	X_____ =	_____
______________________________ ______________________________	_____	_____	_____ X 100 = _____	X_____ =	_____

APPENDIX E (continued)

	Objectives	Target Goal	Output	Effectiveness Score Output / Target Goal X 100 = __%	Weighted Value Weight		Adjusted Score
5.	*Provide guidance and counseling services (career development) information appropriate to continued education or employment for students enrolled in vocational programs.*						
5-a.	___ vocational students will receive career counseling and guidance services.	_____	_____	_____ X 100 = _____	X_____	=	_____
5-b.	___ students will receive career development information during the school year 19__ - 19 __.	_____	_____	_____ X 100 = _____	X_____	=	_____
5-c.	___ percent of the students will indicate career guidance and counseling services as adequate after completion of their vocational program.	_____	_____	_____ X 100 = _____	X_____	=	_____
5-d.	___ percent of the students receiving exploratory career information will rate the experience as having influence on their career choice.	_____	_____	_____ X 100 = _____	X_____	=	_____
	______________________________ ______________________________	_____	_____	_____ X 100 = _____	X_____	=	_____
	______________________________ ______________________________	_____	_____	_____ X 100 = _____	X_____	=	_____

APPENDIX E (continued)

	Objectives	Target Goal	Output	Effectiveness Score	Weighted Value		
				$\frac{\text{Output}}{\text{Target Goal}}$ X 100 = ___%	Weight		Adjusted Score
6.	*Provide vocational programs to fulfill the requirement of the labor markets and the employment community manpower needs.*						
6-a.	___ percent of the student completions will be working in the employment community serviced by the school corporation.	_____	_____	_____ X 100 = _____	X_____	=	_____
6-b.	___ percent of the student completions will seek employment external to the employment community in which they were trained.	_____	_____	_____ X 100 = _____	X_____	=	_____
6-c.	___ percent of all students will be enrolled in the vocational program that is considered to have high employment community and manpower occupational needs. (Projected)	_____	_____	_____ X 100 = _____	X_____	=	_____
6-d.	___ employers will value the vocational program as a source of trained manpower.	_____	_____	_____ X 100 = _____	X_____	=	_____
6-e.	___ employers will indicate that the employees' vocational preparation was critical in the employment decision.	_____	_____	_____ X 100 = _____	X_____	=	_____
6-f.	___ employers will rank the employees' skill and knowledge level at a minimum of fairly skilled or above.	_____	_____	_____ X 100 = _____	X_____	=	_____

APPENDIX E (continued)

	Objectives	Target Goal	Output	Effectiveness Score $\frac{\text{Output}}{\text{Target Goal}}$ X 100 = __%	Weighted Value Weight	Adjusted Score
6-g.	___ employers will indicate job advancement is related to training received in the vocational education programs.	_____	_____	_____ X 100 = _____	X_____ =	_____
6-h.	___ employers will rate the employees on the job maturity factors at a minimum mean of good or above.	_____	_____	_____ X 100 = _____	X_____ =	_____
	_______________________________					
	_______________________________	_____	_____	_____ X 100 = _____	X_____ =	_____
	_______________________________					
	_______________________________	_____	_____	_____ X 100 = _____	X_____ =	_____

APPENDIX E (continued)

	Objectives	Target Goal	Output	Effectiveness Score $\frac{\text{Output}}{\text{Target Goal}}$ X 100 = __%	Weighted Value Weight		Weighted Value Adjusted Score
7.	*Encourage vocational graduates to continue their education after completion of their secondary program*.						
7-a.	___ percent of the students who complete the vocational program will be enrolled in advanced study programs.	_____	_____	_____ X 100 = _____	X_____	=	_____
7-b.	___ percent of the students enrolled in advanced study programs will be in the same program specialty as their secondary vocational program.	_____	_____	_____ X 100 = _____	X_____	=	_____
7-c.	___ percent of the students enrolled in advanced study programs will be in their specialization or programs which they considered related to their secondary vocational program.	_____	_____	_____ X 100 = _____	X_____	=	_____
7-d.	___ percent of the students enrolled in advanced study programs will rate their secondary vocational program as instrumental in their decision to continue their education.	_____	_____	_____ X 100 = _____	X_____	=	_____
7-e.	___ percent of the students enrolled in advanced study programs will indicate their vocational program prepared them for their pursuit of advanced study.	_____	_____	_____ X 100 = _____	X_____	=	_____

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